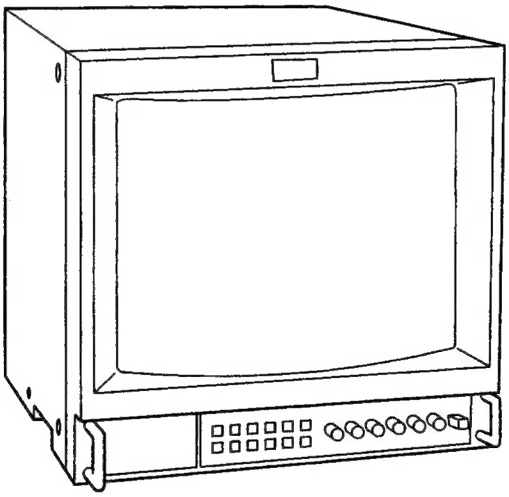
SERVICE MANUAL

MODEL	DEST.	CHASSIS NO.
PVM-14M2U	US Canadian	SCC-G61J-A
PVM-14M4U	US Canadian	SCC-G61G-A
PVM-14M2E	AEP	SCC-G62HA
PVM-14M4E	AEP	SCC-G62F-A
PVM-14M2A	Australian	SCC-N17A-A
PVM-14M4A	Australian	SCC-N17B-A



HR Trinitron
PVM-14M4U/14M4E

Trinitron
PVM-14M2U/14M2E

TRINITRON® COLOR VIDEO MONITOR

SONY®

SPECIFICATIONS

Video signal

For PVM-14M4U/14M4E/20M4U/20M4E:

Color system	NTSC, PAL, SECAM, NTSC$_{4.43}$
Resolution	800 TV lines
Aperture correction	0 dB to +6 dB
Frequency response	
LINE	10 MHz ± 3 dB (Y signal)
RGB	10 MHz ± 3 dB
Synchronization	AFC time constant 1.0 msec.

For PVM-14M2U/14M2E/20M2U/20M2E:

Color system	NTSC, PAL, SECAM, NTSC$_{4.43}$
Resolution	600 TV lines
Aperture correction	0 dB to +6 dB
Frequency response	
LINE	10 MHz ± 3 dB (Y signal)
RGB	10 MHz ± 3 dB
Synchronization	AFC time constant 1.0 msec.

Picture performance

For PVM-14M4U/14M4E/14M2U/14M2E:

Normal scan	7 % over scan of CRT effective screen area
Under scan	5 % underscan of CRT effective screen area
H. linearity	Less than 4.0 % (typical)
V. linearity	Less than 4.0 % (typical)
Convergence	
Central area:	0.4 mm (typical)
Peripheral area:	0.5 mm (typical)
Raster size stability	H: 1.0%, V: 1.5%
High voltage regulation	3.5 %
Color temperature	D65/D93, selectable USER (3,200K–10,000K, factory setting is D65)

For PVM-20M4U/20M4E:

Normal scan	7 % over scan of CRT effective screen area
Under scan	5 % underscan of CRT effective screen area
H. linearity	Less than 5.0 % (typical)
V. linearity	Less than 5.0 % (typical)
Convergence	
Central area:	0.5 mm (typical)
Peripheral area:	0.7 mm (typical)
Raster size stability	H: 1.0%, V: 1.5%
High voltage regulation	4.0 %
Color temperature	D65/D93, selectable USER (3,200K–10,000K, factory setting is D65)

For PVM-20M2U/20M2E

Normal scan	7 % over scan of CRT effective screen area
Under scan	5 % underscan of CRT effective screen area
H. linearity	Less than 5.0 % (typical)
V. linearity	Less than 5.0 % (typical)
Convergence	
Central area:	0.6 mm (typical)
Peripheral area:	1.0 mm (typical)
Raster size stability	H: 1.0%, V: 1.5%
High voltage regulation	4.0 %
Color temperature	D65/D93, selectable USER (3,200K–10,000K, factory setting is D65)

Inputs

For PVM-14M4U/14M4E/20M4U/20M4E:

LINE A/B	
VIDEO IN	BNC connector (×2), 1Vp-p ±6 dB, sync negative Automatic 75 ohms termination
AUDIO IN	Phono jack (×2), –5 dBu[a)], more than 47 kilo-ohms
LINE C	
Y/C IN	4-pin mini-DIN (×1) See the pin assignment on page 19.
AUDIO IN	Phono jack (×1), –5 dBu[a)], more than 47 kilo-ohms
RGB/COMPONENT	
R/R-Y,G/Y,B/B-Y IN:	BNC connector (×3) R, G, B channels: 0.7 Vp-p, ±6 dB Sync on green: 0.3 Vp-p, negative R-Y, B-Y channels: 0.7 Vp-p, ±6 dB Y channel: 0.7 Vp-p, ±6 dB (Standard color bar signal of 75% chrominance) Automatic 75 ohms termination
AUDIO IN	Phono jack (×1), –5 dBu[a)], more than 47 kilo-ohms
EXT SYNC IN	BNC connector (×1) 4 Vp-p, ±6 dB, sync negative
REMOTE	20-pin connector (×1) See the pin assignment on page 19.

a) 0 dBu = 0.775 Vr.m.s.

For PVM-14M2U/14M2E/20M2U/20M2E:

LINE A/B	
VIDEO IN	BNC connector (×2), 1 Vp-p ± 6dB, sync negative Automatic 75 ohms termination
AUDIO IN	Phono jack (×2), –5 dBu[a], more than 47 kilo-ohms
LINE C	
Y/C IN	4-pin mini-DIN (×1) See the pin assignment on page 19.
AUDIO IN	Phono jack (×1), –5 dBu[a], more than 47 kilo-ohms
RGB/COMPONENT	
R/R-Y,G/Y,B/B-Y IN	BNC connector (×3) R, G, B channels: 0.7 Vp-p ± 6dB Sync on green: 0.3 Vp-p negative R-Y, B-Y channel: 0.7 Vp-p ± 6dB Y channel: 0.7 Vp-p ± 6dB (Standard color bar signal of 75% chrominance) Automatic 75 ohms termination
AUDIO IN	Phono jack (×1), –5 dBu[a], more than 47 kilo-ohms
EXT SYNC IN	BNC connector (×1) 4 Vp-p, ±6 dB, sync negative
REMOTE	20-pin connector (×1) See the pin assignment on page 19.

a) 0 dBu = 0.775 Vr.m.s.

Outputs (common to all models)

LINE A/B	
VIDEO OUT	BNC connector (×2) loop-through, Automatic 75 ohms termination
AUDIO OUT	Phono jack (×2) loop-through
LINE C	
Y/C OUT	4-pin mini-DIN (×1) loop-through, Automatic 75 ohms termination
AUDIO OUT	Phono jack (×1) loop-through
RGB/COMPONENT	
R/R-Y,G/Y,B/B-Y OUT	BNC connector (×3) loop-through Automatic 75 ohms termination
AUDIO OUT	Phono jack (×1) loop-through
EXT SYNC OUT	BNC connector (×1) Automatic 75 ohms termination
Speaker output	Output level: 0.8 W

General

For PVM-14M4U:

CRT	SMPTE-C phosphor
Power consumption	90 Wh (with SDI: 99 Wh)
Power requirements	120 V AC, 50/60Hz
Operating temperature	0 to +35°C (32 to 95°F)
Storage temperature	–10 to +40°C (14 to104°F)
Operating humidity	35 to 85% (no condensation)
Storage humidity	0 to 90%
Dimensions (w/h/d)	Approx. 346 × 340 × 431 mm (13⅝ × 13½ × 17 inches) not incl. projecting parts and controls
Mass	Approx. 16.7kg (36 lb 13 oz)
Accessory supplied	AC power cord (1) AC plug holder (1) Tally label (1) Cable with a 20-pin connector (1)

For PVM-14M4E:

CRT	EBU phosphor
Power consumption	90 Wh (with SDI: 99 Wh)
Power requirements	100 to 240 V AC, 50/60Hz
Operating temperature	0 to +35°C (32 to 95°F)
Storage temperature	–10 to +40°C (14 to104°F)
Operating humidity	35 to 85% (no condensation)
Storage humidity	0 to 90%
Dimensions (w/h/d)	Approx. 346 × 340 × 431 mm (13⅝ × 13½ × 17 inches) not incl. projecting parts and controls
Mass	Approx. 16.7kg (36 lb 13 oz)
Accessory supplied	AC power cord (1) AC plug holder (1) Tally label (1) Cable with a 20-pin connector (1)

For PVM-14M2U:

CRT	P-22 phosphor
Power consumption	90 Wh (with SDI: 99 Wh)
Power requirements	120 V AC, 50/60Hz
Operating temperature	0 to +35°C (32 to 95°F)
Storage temperature	–10 to +40°C (14 to104°F)
Operating humidity	35 to 85% (no condensation)
Storage humidity	0 to 90%
Dimensions (w/h/d)	Approx. 346 × 340 × 431 mm (13⅝ × 13½ × 17 inches) not incl. projecting parts and controls
Mass	Approx. 16.7kg (36 lb 13 oz)
Accessory supplied	AC power cord (1) AC plug holder (1) Tally label (1) Cable with a 20-pin connector (1)

For PVM-14M2E:

CRT	P-22 phosphor
Power consumption	90 Wh (with SDI: 99 Wh)
Power requirements	100 to 240 V AC, 50/60Hz
Operating temperature	0 to +35°C (32 to 95°F)
Storage temperature	–10 to +40°C (14 to104°F)
Operating humidity	35 to 85% (no condensation)
Storage humidity	0 to 90%
Dimensions (w/h/d)	Approx. 346 × 340 × 431 mm (13⅝ × 13½ × 17 inches) not incl. projecting parts and controls
Mass	Approx. 16.7kg (36 lb 13 oz)
Accessory supplied	AC power cord (1) AC plug holder (1) Tally label (1) Cable with a 20-pin connector (1)

For PVM-20M4U:

CRT	SMPTE-C phosphor
Power consumption	125 Wh (with SDI: 135 Wh)
Power requirements	120 V AC, 50/60Hz
Operating temperature	0 to +35°C (32 to 95°F)
Storage temperature	–10 to +40°C (14 to104°F)
Operating humidity	35 to 85% (no condensation)
Storage humidity	0 to 90%
Dimensions (w/h/d)	Approx. 450 × 458 × 503 mm (17¾ × 18⅛ × 19⅞ inches) not incl. projecting parts and controls
Mass	Approx. 30.0 kg (66 lb 2 oz)
Accessory supplied	AC power cord (1) AC plug holder (1) Tally label (1) Cable with a 20-pin connector (1)

For PVM-20M4E:

CRT	EBU phosphor
Power consumption	130 Wh (with SDI: 140 Wh)
Power requirements	100 to 240 V AC, 50/60Hz
Operating temperature	0 to +35°C (32 to 95°F)
Storage temperature	–10 to +40°C (14 to104°F)
Operating humidity	35 to 85% (no condensation)
Storage humidity	0 to 90%
Dimensions (w/h/d)	Approx. 450 × 458 × 503 mm (17¾ × 18⅛ × 19⅞ inches) not incl. projecting parts and controls
Mass	Approx. 30.0 kg (66 lb 2 oz)
Accessory supplied	AC power cord (1) AC plug holder (1) Tally label (1) Cable with a 20-pin connector (1)

For PVM-20M2U:

CRT	P-22 phosphor
Power consumption	115 Wh (with SDI: 125 Wh)
Power requirements	120 V AC, 50/60Hz
Operating temperature	0 to +35°C (32 to 95°F)
Storage temperature	–10 to +40°C (14 to104°F)
Operating humidity	35 to 85% (no condensation)
Storage humidity	0 to 90%
Dimensions (w/h/d)	Approx. 450 × 458 × 503 mm (17¾ ×18⅛ × 19⅞ inches) not incl. projecting parts and controls
Mass	Approx. 30.0 kg (66 lb 2 oz)
Accessory supplied	AC power cord (1) AC plug holder (1) Tally label (1) Cable with a 20-pin connector (1)

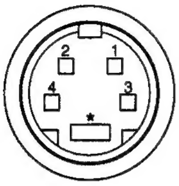
For PVM-20M2E:

CRT	P-22 phosphor
Power consumption	120 Wh (with SDI: 130 Wh)
Power requirements	100 to 240 V AC, 50/60Hz
Operating temperature	0 to +35°C (32 to 95°F)
Storage temperature	–10 to +40°C (14 to104°F)
Operating humidity	35 to 85% (no condensation)
Storage humidity	0 to 90%
Dimensions (w/h/d)	Approx. 450 × 458 × 503 mm (17¾ ×18⅛ × 19⅞ inches) not incl. projecting parts and controls
Mass	Approx. 30.0 kg (66 lb 2 oz)
Accessory supplied	AC power cord (1) AC plug holder (1) Tally label (1) Cable with a 20-pin connector (1)

Design and specifications are subject to change without notice.

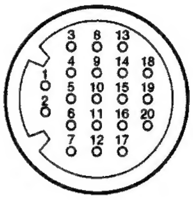
Pin assignment

Y/C IN connector (4-pin mini-DIN)



Pin No.	Signal	Description
1	Y-input	1 Vp-p, sync negative, 75 ohms
2	CHROMA subcarrier-input	300m Vp-p, burst Delay time between Y and C: within 0 ± 100 nsec., 75 ohms
3	GND for Y-input	GND
4	GND for CHROMA-input	GND

REMOTE connector (20-pin)



Pin No.	Signal	Wire color
1	Blue only	Brown
2	H/V DELAY	Red
3	MAIN/SUB*	Orange
4	EXT SYNC	Yellow
5	DEGAUSS	Green
6	R ch ON/OFF*	Blue
7	TALLY	Purple
8	LINE B	Grey
9	GND	White
10	GND	Black
11	GND	Pink
12	GND	Light Blue
13	LINE A	Spiral Orange
14	LINE/RGB	Spiral Yellow
15	GND	Spiral Green
16	L ch ON/OFF*	Spiral Blue
17	REMOTE	Spiral Purple
18	LINE C	Spiral Grey
19	UNDER SCAN	Spiral Pink
20	16:9	Spiral Light Blue

(* For digital audio control)

How to connect a remote control unit

Connect No.17 pin to one of the GND pins (No.9 – 12, and 15), then connect pins for the functions you want to use to other GND pins (No.9 – 12, and 15).

How to light the tally lamp

Connect No.7 pin to one of the GND pins (No.9 – 12, and 15).

SAFETY CHECK-OUT
(US Model only)

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:

1. Check the area of your repair for unsoldered or poorly-soldered connections. Check the entire board surface for solder splashes and bridges.
2. Check the interboard wiring to ensure that no wires are "pinched" or contact high-wattage resistors.
3. Check that all control knobs, shields, covers, ground straps, and mounting hardware have been replaced. Be absolutely certain that you have replaced all the insulators.
4. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.
5. Look for parts which, though functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.
6. Check the line cords for cracks and abrasion. Recommend the replacement of any such line cord to the customer.
7. Check the B+ and HV to see if they are at the values specified. Make sure your instruments are accurate; be suspicious of your HV meter if sets always have low HV.
8. Check the metal trim, metallized knobs, screws, and all other exposed metal parts for AC leakage.
   Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5mA (500 microampers). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufactures' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

HOW TO FIND A GOOD EARTH GROUND

A cold-water pipe is guaranteed earth ground; the cover-plate retaining screw on most AC outlet boxes is also at earth ground. If the retaining screw is to be used as your earth-ground, verify that it is at ground by measuring the resistance between it and a cold-water pipe with an ohmmeter. The reading should be zero ohms. If a cold-water pipe is not accessible, connect a 60-100 watts trouble light (not a neon lamp) between the hot side of the receptacle and the retaining screw. Try both slots, if necessary, to locate the hot side of the line, the lamp should light at normal brilliance if the screw is at ground potential. (See Fig. B)

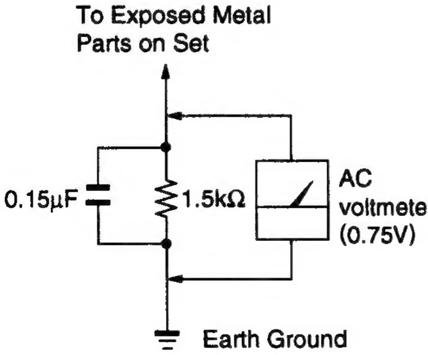


Fig. A. Using an AC voltmeter to check AC leakage.

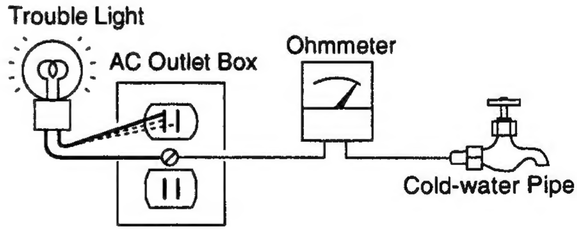


Fig. B. Checking for earth ground.

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1. GENERAL

2. DISASSEMBLY

3. SET-UP ADJUSTMENTS

5. CIRCUIT ADJUSTMENTS

6. DIAGRAMS

7. EXPLODED VIEWS

(CAUTION)
SHORT CIRCUIT THE ANODE OF THE PICTURE TUBE AND THE ANODE CAP TO THE METAL CHASSIS, CRT SHIELD, OR CARBON PAINTED ON THE CRT, AFTER REMOVING THE ANODE.

WARNING!!
AN ISOLATION TRANSFORMER SHOULD BE USED DURING ANY SERVICE TO AVOID POSSIBLE SHOCK HAZARD, BECAUSE OF LIVE CHASSIS.
THE CHASSIS OF THIS RECEIVER IS DIRECTLY CONNECTED TO THE AC POWER LINE.

SAFETY-RELATED COMPONENT WARNING!!
COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL FOR SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY. CIRCUIT ADJUSTMENTS THAT ARE CRITICAL FOR SAFE OPERATION ARE IDENTIFIED IN THIS MANUAL. FOLLOW THESE PROCEDURES WHENEVER CRITICAL COMPONENTS ARE REPLACED OR IMPROPER OPERATION IS SUSPECTED.

(ATTENTION)
APRES AVOIR DECONNECTE LE CAP DE L'ANODE, COURT-CIRCUITER L'ANODE DU TUBE CATHODIQUE ET CELUI DE L'ANODE DU CAP AU CHASSIS METALLIQUE DE L'APPAREIL, OU AU COUCHE DE CARBONE PEINTE SUR LE TUBE CATHODIQUE OU AU BLINDAGE DU TUBE CATHODIQUE.

ATTENTION!!
AFIN D'EVITER TOUT RESQUE D'ELECTROCUTION PROVENANT D'UN CHÁSSIS SOUS TENSION, UN TRANSFORMATEUR D'ISOLEMENT DOIT ETRE UTILISÉ LORS DE TOUT DÉPANNAGE. LE CHÁSSIS DE CE RÉCEPTEUR EST DIRECTEMENT RACCORDÉ À L'ALIMENTATION SECTEUR.

ATTENTION AUX COMPOSANTS RELATIFS À LA SÉCURITÉ!!
LES COMPOSANTS IDENTIFIÈS PAR UNE TRAME ET PAR UNE MARQUE ⚠ SUR LES SCHÉMAS DE PRINCIPE, LES VUES EXPLOSÉES ET LES LISTES DE PIECES SONT D'UNE IMPORTANCE CRITIQUE POUR LA SÉCURITÉ DU FONCTIONNEMENT. NE LES REMPLACER QUE PAR DES COMPOSANTS SONY DONT LE NUMÉRO DE PIÉCE EST INDIQUÉ DANS LE PRÉSENT MANUEL OU DANS DES SUPPLÉMENTS PUBLIÉS PAR SONY. LES RÉGLAGES DE CIRCUIT DONT L'IMPORTANCE EST CRITIQUE POUR LA SÉCURITÉ DU FONCTIONNEMENT SONT IDENTIFIES DANS LE PRÉSENT MANUEL. SUIVRE CES PROCÉDURES LORS DE CHAQUE REMPLACEMENT DE COMPOSANTS CRITIQUES, OU LORSQU'UN MAUVAIS FONCTIONNEMENT EST SUSPECTÉ.

SECTION 1
GENERAL

The operating instructions mentioned here are partial abstracts from the Operating Instruction Manual. The page numbers of the Operating Instruction Manual remain as in the manual.

Features

Picture

HR (High Resolution) Trinitron [1] picture tube for PVM-14M4U/14M4E/20M4U/20M4E
HR Trinitron tube provides a high resolution picture. Horizontal resolution is more than 800 TV lines at the center of the picture.

Trinitron[1] picture tube for PVM-14M2U/14M2E/20M2U/20M2E
Trinitron tube provides a high resolution picture. Horizontal resolution is more than 600 TV lines at the center of the picture.

Comb filter
When NTSC video signals are received, a comb filter activates to make more accurate Y/C separation. This contributes to less of a decrease in resolution, cross color and cross luminance phenomena.

Beam current feedback circuit
The built-in beam current feedback circuit assures stable white balance.

Four color system available
The monitor can display NTSC, PAL, SECAM and $NTSC_{4.43}$[2] signals. The appropriate color system is selected automatically.

Blue only mode
In the blue only mode, an apparent monochrome display is obtained with all three cathodes driven with a blue signal. This facilitates color saturation and phase adjustments and observation of VCR noise.

Input

Analog RGB/component input connectors
Analog RGB or component (Y, R-Y and B-Y) signals from video equipment can be input through these connectors.

Y/C input connectors
The video signal, split into the chrominance signal (C) and the luminance signal (Y), can be input through this connector, eliminating the interference between the two signals, which tends to occur in a composite video signal, ensuring video quality.

External sync input
When the EXT SYNC selector is in the on position, the monitor can be operated on the sync signal supplied from an external sync generator.

Automatic termination (connector with -∿- mark only)
The input connector is terminated at 75 ohms inside when no cable is connected to the loop-through output connector. When a cable is connected to an output connector, the 75-ohm termination is automatically released.

Functions

Underscan mode
The signal normally scanned outside of the screen can be monitored in the underscan mode.

Note

When the monitor is in the underscan mode, the dark RGB scanning lines may appear on the top edge of the screen. These are caused by an internal test signal, rather than the input signal.

Horizontal/vertical delay mode
The horizontal and vertical sync signals can be checked simultaneously in the H/V delay mode.

Auto/manual degaussing
Degaussing of the screen can be performed automatically when the power is turned on, or manually by pressing the DEGAUSS button.

On-screen menus
You can set color temperature, CHROMA SET UP, and other settings by using the on-screen menus.

Five menu languages
You can select the menu language from among five languages on the menu.

EIA standard 19-inch rack mounting
By using an MB-502B mounting bracket (for a 14-inch monitor, not supplied) or SLR-103A slide rail (for a 20-inch monitor, not supplied), the monitor can be mounted in an EIA standard 19-inch rack.

For details on mounting, refer to the instruction manuals supplied with the mounting bracket kit or slide rail kit.

SDI (Serial Digital Interface) Kit
By using the following optional SDI Kits, the monitor can display SMPTE 259M 4:2:2 serial digital signal from a digital VCR. (ex. Sony 4:2:2 VCR)

- BKM-101C: Component SDI Kit (for video)
- BKM-102: Component SDI Kit (for audio)

Note

When the serial number of the BKM-101C you want to connect is less than 2,010,000, an optional connecting harness (part no. 1-900-230-35) will be required.

Serial Remote Interface Kit
By using the optional BKM-103 Serial Remote Interface Kit, the monitor can be controlled from personal computers via the RS-422A serial interface.

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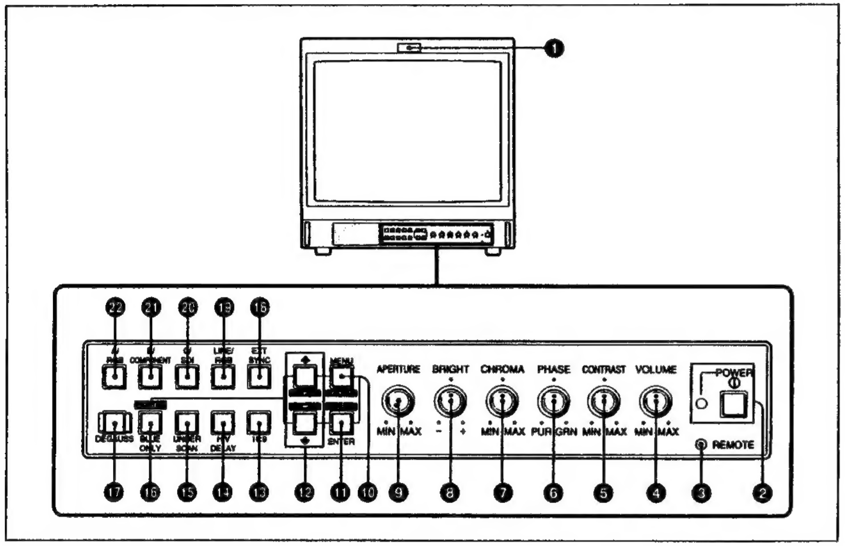
[1] "Trinitron" is a registered trademark of Sony Corporation.

[2] The $NTSC_{4.43}$ system refers to an NTSC color system in which the subcarrier frequency is modified to 4.43MHz. When an NTSC recorded video program is played back with a Trident ($PAL/SECAM/NTSC_{4.43}$) VTR, the $NTSC_{4.43}$ signal is output.

Location and Function of Parts and Controls

Front



① Tally lamp

Lights up when the video camera connected to this monitor is selected, indicating that the picture is being recorded.

For details on how to light the tally lamp, see page 19.

② POWER switch and indicator

Depress to turn on the monitor. The indicator will light green.

③ REMOTE indicator

Lights up when you select ON on the USER PRESET menu (see page 13), or when you connect a supplied cable to the REMOTE connector. The controls on the front panel do not work when this indicator lights up.

For details on how to connect the cable, see page 19.

④ VOLUME control

Turn this control clockwise or counterclockwise to obtain the desired volume.

⑤ CONTRAST control

Turn this control clockwise to make the contrast higher or counterclockwise to make it lower.

⑥ PHASE control

This control is effective only for the NTSC and $NTSC_{4.43}$ color systems. Turn it clockwise to make the skin tones greenish or counterclockwise to make them purplish.

⑦ CHROMA control

Turn this control clockwise to increase the color intensity or counterclockwise to decrease it.

⑧ BRIGHT (brightness) control

Turn this control clockwise to increase the brightness or counterclockwise to decrease it.

⑨ APERTURE control

Turn this control clockwise to increase sharpness or counterclockwise to decrease sharpness.

Note

The PHASE (⑥), CHROMA (⑦) and APERTURE (⑨) controls have no effect on the pictures of RGB signals.

⑩ MENU (EXIT) button

Press this button to display the main menu.
When a menu is on the display, you can return to the previous menu by pressing this button.

⑪ ENTER (SELECT) button

Press the button to confirm a selected item on the menu.

⑫ ⬆ (+)/ ⬇ (–) buttons

Press the buttons to move the cursor (▶) or adjust selected item on the menu.

⑬ 16:9 selector

Press this selector (light on) to monitor the signals of 16:9 picture.

⑭ H/V DELAY selector

Press this selector (light on) to observe the horizontal and vertical sync signals at the same time.
The horizontal sync signal is displayed in the left quarter of the screen; the vertical sync signal is displayed near the center of the screen.

⑮ UNDER SCAN selector

Press this selector (light on) for underscanning.
The display size is reduced by approximately 5% so that four corners of the raster are visible.

⑯ BLUE ONLY selector RESET button

- As the BLUE ONLY selector, press this selector (light on) to eliminate the red and green signals. Only blue signal is displayed as an apparent monochrome picture on the screen. This facilitates "chroma" and "phase" adjustments and observation of VCR noise.
  ("Phase" adjustment is effective only for the NTSC signals.)
- As the RESET button, you can reset the menu settings by pressing this button when a menu is on the display.

⑰ DEGAUSS button

Press this button momentarily. The screen will be demagnetized. Wait for 10 minutes or more before using this button again.

⑱ EXT SYNC (external sync) selector

- Set this selector to the off position (light off) to operate the monitor on the sync signal from the displayed video signal.
- Set this selector to the on position (light on) to operate the monitor on an external sync signal through the EXT SYNC connector.

⑲ LINE/RGB input selector

Press this selector to select the input to be monitored.
- Set this selector to the off position (light off) to monitor the signal through the LINE A, LINE B or LINE C connectors.
- Set this selector to the on position (light on) to monitor the signal through the RGB/COMPONENT connectors.

⑳ C/SDI selector

- When the LINE/RGB input selector is set to the LINE position (light off), press this selector (light on) to monitor the signal through the LINE C connectors.
- When the LINE/RGB input selector is set to the RGB position (light on), press this selector (light on) to monitor the SDI signal (optional kits are required).

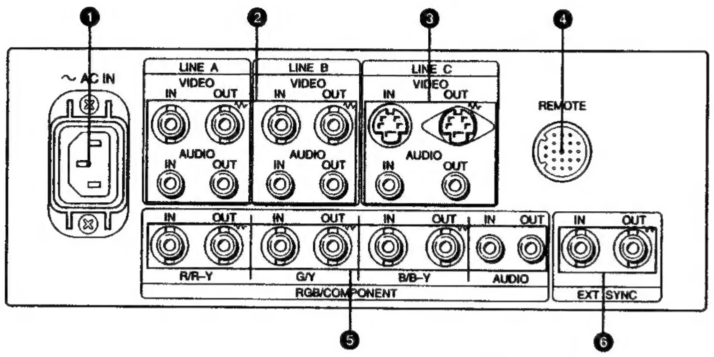
㉑ B/COMPONENT selector

- When the LINE/RGB input selector is set to the LINE position (light off), press this selector (light on) to monitor the signal through the LINE B connectors.
- When the LINE/RGB input selector is set to the RGB position (light on), press this selector (light on) to monitor the component signal through the RGB/COMPONENT connectors.

㉒ A/RGB selector

- When the LINE/RGB input selector is set to the LINE position (light off), press this selector (light on) to monitor the signal through the LINE A connectors.
- When the LINE/RGB input selector is set to the RGB position (light on), press this selector (light on) to monitor the RGB signal through the RGB/COMPONENT connectors.

Rear Panel



(The -ʌʌ- mark indicates automatic termination.)

❶ AC IN socket
Connect the supplied AC power cord to this socket and to a wall outlet.

❷ LINE A, LINE B connectors
Two groups (A and B) of line input connectors for the composite video and audio signals and their loop-through output connectors.
To monitor the input signal through these connectors, set the LINE/RGB selector to the LINE position (light off) and press the A/RGB or B/COMPONENT selector (light on).

VIDEO IN (BNC)
Connect to the video output of video equipment, such as a VCR or a color video camera.
For a loop-through connection, connect to the video output of another monitor.

VIDEO OUT (BNC)
Loop-through output of the VIDEO IN connector.
Connect to the video input of a VCR or another monitor.
When the cable is connected to this connector, the 75-ohm termination of the input is automatically released, and the signal input to the VIDEO IN connector is output from this connector.

AUDIO IN (phono jack)
Connect to the audio output of a VCR or to a microphone via a suitable microphone amplifier.
For a loop-through connection, connect to the audio output of another monitor.

AUDIO OUT (phono jack)
Loop-through output of the AUDIO IN connector.
Connect to the audio input of a VCR or another monitor.

❸ LINE C connectors
Y/C IN (4-pin mini-DIN)
Connect to the Y/C separate output of a video camera, VCR or other video equipment.
For a loop-through connection, connect to the Y/C separate output of a VCR or another monitor.

Y/C OUT (4-pin mini-DIN)
Loop-through output of the Y/C IN connector.
Connect to the Y/C separate input of a VCR or another monitor.
When the cable is connected to this connector, the 75-ohm termination of the input is automatically released, and the signal input to the Y/C IN connector is output from this connector.

AUDIO IN (phono jack)
Connect to the audio output of a VCR or a microphone (via a suitable microphone amplifier).

AUDIO OUT (phono jack)
Loop-through output of the AUDIO IN connector.
Connect to the audio input of a VCR or another monitor.

❹ REMOTE connector (20-pin)
Connect to the tally output of a control console, special-effect generator, etc. The tally lamp on the front panel will be turned on and off by the connected equipment. This connector can also be used for connecting a remote control unit.

For details on the pin assignment of this connector, see page 19.

❺ RGB/COMPONENT connectors
RGB signal or component signal input connectors and their loop-through output connectors.
To monitor the input signal through these connectors, set the LINE/RGB selector to the RGB position (light on), and press the A/RGB or B/COMPONENT selector (light on).

R/R-Y IN, G/Y IN, B/B-Y IN (BNC)
When the EXT SYNC selector is set to the off position (light off), the monitor operates on the sync signal from the G/Y channel.

To monitor the RGB signal
Connect to the analog RGB signal outputs of a video camera, etc.

To monitor the component signal
Connect to the R-Y/Y/B-Y component signal outputs of a Sony Betacam video camera, etc.

R/R-Y OUT, G/Y OUT, B/B-Y OUT (BNC)
Loop-through outputs of the R/R-Y IN, G/Y IN, B/B-Y IN connectors.
When the cables are connected to these connectors, the 75-ohm termination of the inputs is automatically released, and the signal inputs to the R/R-Y IN, G/Y IN, B/B-Y IN connectors are output from these connectors.

To output the RGB signal
Connect to the analog RGB signal inputs of a video printer or another monitor.

To output the component signal
Connect to the R-Y/Y/B-Y component signal inputs of a Betacam video recorder, etc.

AUDIO IN (phono jack)
Connect to the audio output of video equipment when the analog RGB or component signal is input.

AUDIO OUT (phono jack)
Loop-through outputs of the AUDIO IN connector.

❻ EXT SYNC (external sync) connectors
Press the EXT SYNC selector (light on) to use the sync signal through this connector.

IN (BNC)
When this monitor operates on an external sync signal, connect the reference signal from a sync generator to this connector.

OUT (BNC)
Loop-through output of the IN connector. Connect to the external sync input of video equipment to be synchronized with this monitor.
When the cable is connected to this connector, the 75-ohm termination of the input is automatically released, and the signal input to the IN connector is output from this connector.

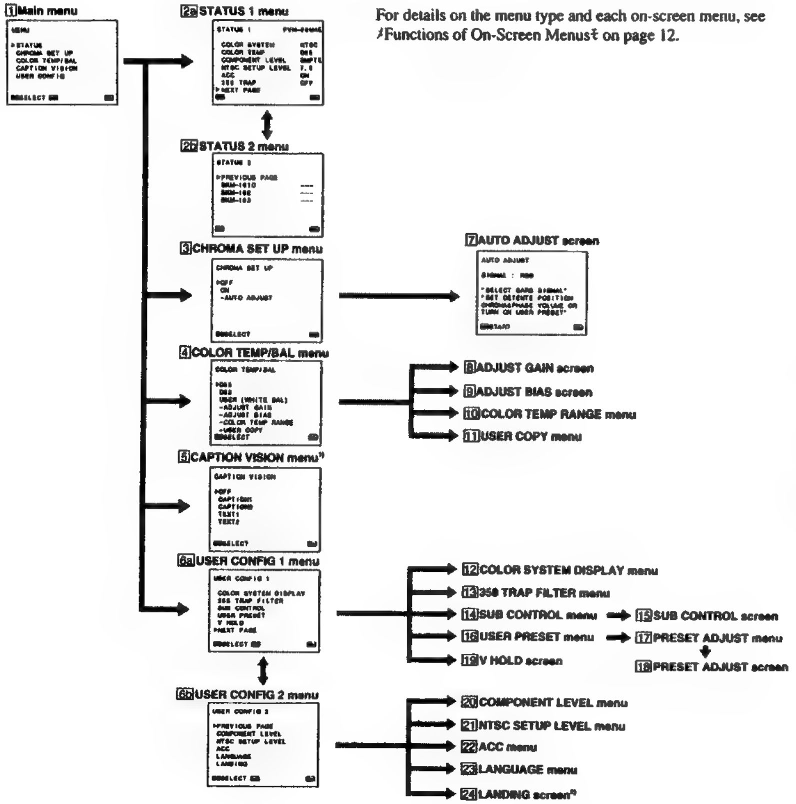
Using On-Screen Menus

You can make various settings and adjustments of the monitor using the on-screen menus.

On-Screen Menu Configuration

On-screen menu tree-chart

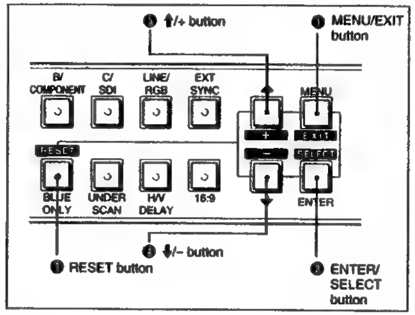
For details on the menu type and each on-screen menu, see ⁄Functions of On-Screen Menus‡ on page 12.



Operation through On-Screen Menus

Menu operation buttons

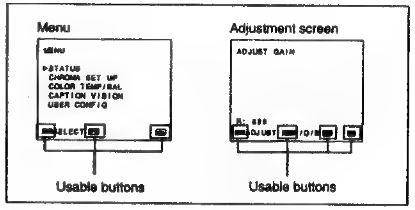
There are five menu operation buttons on the front panel of the monitor.



The following table shows how these five buttons function when using the menus.

Button	To select menu item To adjust the item selected
① MENU EXIT	return to the previous menu return to the previous menu
② ENTER SELECT	decide a selected item select an adjustment item
③ ↑ +	move the cursor (▶) upwards increase selected value
④ ↓ –	move the cursor (▶) downwards decrease selected value
⑤ RESET	reset current settings to the factory setting

The buttons that can be used on the menus and adjustment screens are displayed at the bottom of the screen. You can perform menu operation using the displayed buttons.



Display of the usable menu operation buttons

Operating procedures

To display the menu, follow this procedure.

1 Press the MENU/EXIT (①) button.

MENU (1 : main menu) appears.

2 Move the cursor (▶) to the desired setting menu by pressing the ↓/– or ↑/+ (④, ③) button.

3 Press the ENTER/SELECT (②) button.

The setting menu selected in step 2 appears.

4 Move the cursor (▶) to the desired item by pressing the ↓/– or ↑/+ (④, ③) button.

5 Press the ENTER/SELECT (②) button.

The adjustment screen or setting menu selected in step 4 appears.

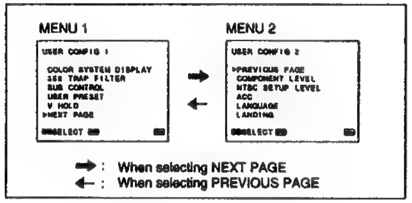
For detailed information of menus, see ⁄Functions of On-Screen Menus‡ on page 12.

---

1) 5 CAPTION VISION menu is provided with PVM-14M4U/14M2U/20M4U/20M2U only.
2) 24 LANDING screen is provided with PVM-20M4U/20M4E only.

To display the next (or previous) page of the menus

Select NEXT PAGE on the menu to display the next page and PREVIOUS PAGE on the menu to display the previous page.

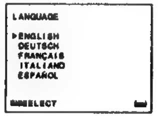


How to display the next or the previous page

To close the menu (to return to the regular screen)

Each time you press the MENU/EXIT (❶) button, the on-screen menu returns to the one previously displayed. Press the MENU/EXIT (❶) button repeatedly until the regular screen appears.

For PVM-14M4E/14M2E/20M4E/20M2E:
For the first time when the monitor is turned on, the LANGUAGE menu ([23]) will appear on the screen. So, select the language you want to use.



1 Move the cursor (▶) to the desired language by pressing the ⬇/– or ⬆/+ (❹, ❸) button.

2 Press the MENU/EXIT (❶) button.

Note

Unless you press the MENU/EXIT (❶) button in the procedure above, the LANGUAGE menu will always appear whenever you turn on the monitor.

Functions of On-Screen Menus

There are four types of on-screen menus.

Main menu
You can enter another menu such as status menu or setting menu.

Status menu
You can confirm the current settings.

Setting menu
You can select an item or enter an adjustment screen on this menu by using the ⬆/+, ⬇/– and ENTER/SELECT buttons.

Adjustment screen
You can make adjustments on this screen. The adjustments you made remain unchanged until next change even if you turn off the power.

([ ] indicates the factory setting.)

[1] Main menu

Select another menu and press ENTER/SELECT to go to the menu.

[2a] STATUS 1 menu

Shows the current settings.

[2b] STATUS 2 menu

Shows what optional kit is installed in the monitor.

[3] CHROMA SET UP menu

Select ON on this menu to activate "chroma" and "phase" (NTSC signal only) adjustments done on the AUTO ADJUST screen ([7]). [OFF]

[4] COLOR TEMP/BAL menu

Select the color temperature from among D65, D93 and USER. USER is set to D65 as the factory setting. You can adjust or change the color temperature in USER mode (a measuring instrument is required). [D65]

[5] CAPTION VISION menu

This menu is provided only for PVM-14M4U/14M2U/20M4U/20M2U.
The monitor can display the signal with Caption Vision. To display it, select the caption type in this menu. [OFF]

[6a] USER CONFIG 1 menu

Select an item to adjust on the menus and screens ([12] through [19]). To go to the USER CONFIG 2 menu, select NEXT PAGE.

[6b] USER CONFIG 2 menu

Select an item to adjust on the menus and screens ([20] through [24]). To go to the USER CONFIG 1 menu select PREVIOUS PAGE.

[7] AUTO ADJUST screen

Select the color bar signal (full, SMPTE, EIA) and press ENTER/SELECT to start automatic "chroma" and "phase" (NTSC signal only) adjustments.
To activate these adjustments, select ON on the CHROMA SET UP menu ([3]).

[8] ADJUST GAIN screen

Adjust GAIN in USER mode.

[9] ADJUST BIAS screen

Adjust BIAS in USER mode.

[10] COLOR TEMP RANGE menu

Select the color temperature range in USER mode. [5000K-10000K]

[11] USER COPY menu

Store the factory setting of D65 or D93 as the value for USER mode.

[12] COLOR SYSTEM DISPLAY menu

Select the color system type. When AUTO is selected, the color system type being used appears on the screen each time you change the signal input. [AUTO]

[13] 358 TRAP FILTER menu

Color spill or color noise may be eliminated if you select ON (NTSC signal only).
Normally select OFF. [OFF]

[14] SUB CONTROL menu

Select an item (CONTRAST, BRIGHT, CHROMA and PHASE controls on the front panel) to finely adjust on the SUB CONTROL screen ([15]).

[15] SUB CONTROL screen

Finely adjust the selected item on the SUB CONTROL menu ([14]). Each control (CONTRAST, BRIGHT, CHROMA and PHASE control) has a click position at the center of its adjustment range. You can adjust the setting of the click position with this feature.

[16] USER PRESET menu

If you select ON on this menu, the REMOTE indicator lights up and the controls on the front panel do not work. The monitor operates with the user preset settings.
To adjust the user preset settings, select the PRESET ADJUST menu ([17]). [OFF]

[17] PRESET ADJUST menu

You can preset the BRIGHT, CHROMA, PHASE, CONTRAST, VOLUME, and APERTURE controls to a desired level and can use these settings by selecting ON on the USER PRESET menu ([16]).

[18] PRESET ADJUST screen

Adjust the selected item (BRIGHT, CHROMA, PHASE, CONTRAST, VOLUME, and APERTURE control) on the PRESET ADJUST menu ([17]).

[19] V HOLD screen

Adjust the vertical hold if the picture rolls vertically. When you cannot read the display, select the input that is not connected.

[20] COMPONENT LEVEL menu

Select the component level from among three modes.

N10/SMPTE	for 100/0/100/0 signal
BETA 7.5	for 100/7.5/75/7.5 signal
BETA 0	for 100/0/75/0 signal

For PVM-14M4U/14M2U/20M4U/20M2U [BETA 7.5]
For PVM-14M4E/14M2E/20M4E/20M2E [N10/SMPTE]

21 NTSC SETUP LEVEL menu

Select the NTSC setup level from two modes.
The 7.5 setup level is mainly used in north America.
The 0 setup level is mainly used in Europe.

For PVM-14M4U/14M2U/20M4U/20M2U	[7.5]
For PVM-14M4E/14M2E/20M4E/20M2E	[0]

22 ACC menu

Set ACC (Auto Color Control) circuit on or off. When the fine adjustment is necessary, select OFF on the ACC menu.
Normally select ON. [ON]

23 LANGUAGE menu

You can select the menu language from among five languages (English, German, French, Italian, Spanish). [ENGLISH]

24 LANDING screen

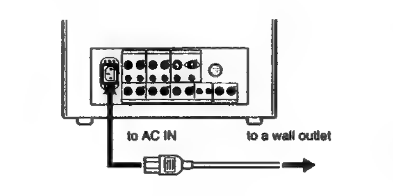
This menu is provided only for PVM-20M4U/20M4E.
If the color is not uniform even after you press the DEGAUSS button, you can adjust the landing so as to obtain color uniformity on this screen.
The following two methods are available to adjust the landing.
When the signals of the horizontal lines are input and displayed:
Press the ⬇/– or ⬆/+ button until the lines are displayed on the screen as horizontally as possible.
When the signals of the white color are input and displayed:
Press the ⬇/– or ⬆/+ button until the white color on the screen become as uniform as possible.

To reset the setting to standard (00), press the RESET button.

Connections

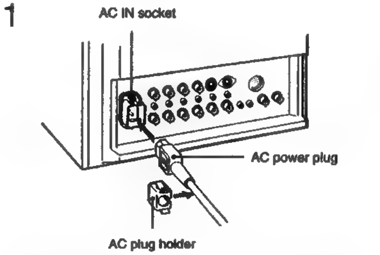
How to Connect the AC Power Cord

Connect the AC power cord (supplied) to the AC IN socket and to a wall outlet.



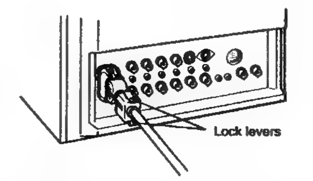
To connect an AC power cord securely with an AC plug holder

1



Plug the power cord into the AC IN socket. Then, attach the AC plug holder (supplied) on top of the AC power cord.

2



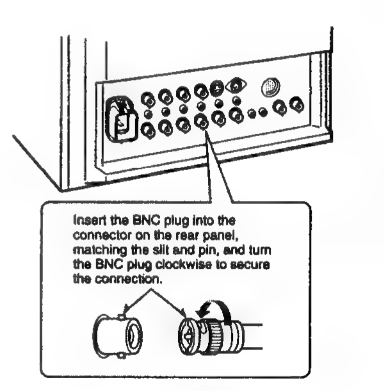
Slide the AC plug holder over the cord until it locks.

To remove the AC power cord

Pull out the AC plug holder while pressing the lock levers.

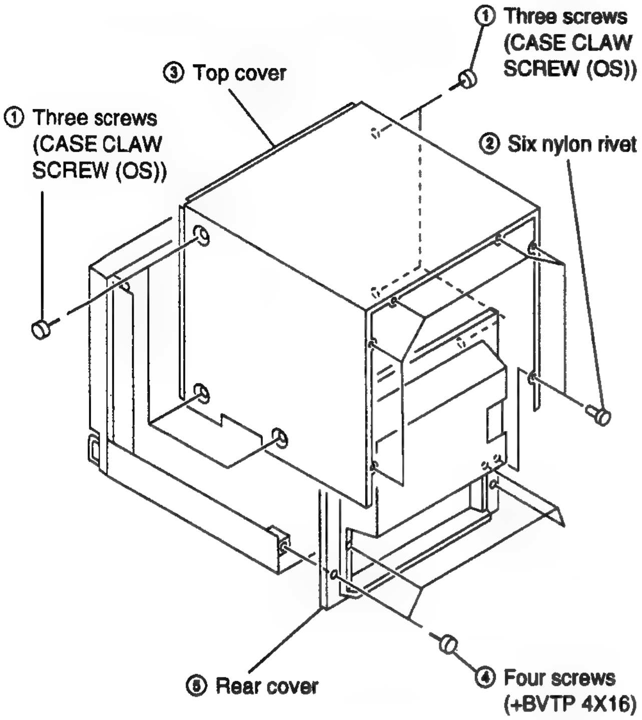
How to Connect a Cable to a BNC Connector

Connect a coaxial cable with the BNC plugs to the BNC connectors on the rear panel as illustrated below.

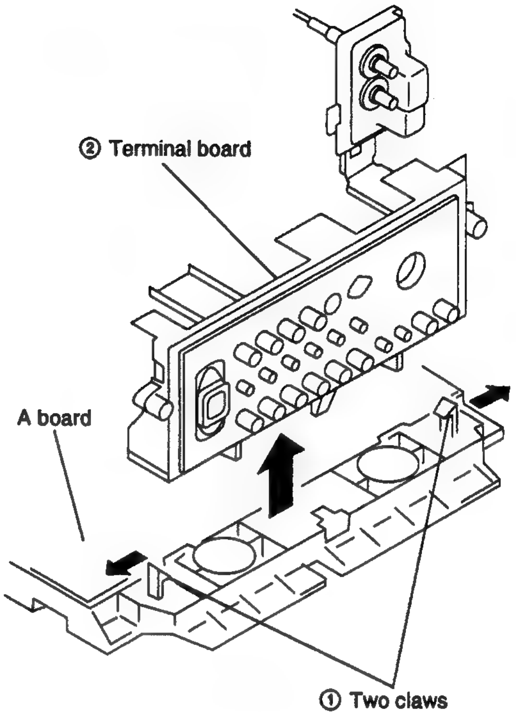

Insert the BNC plug into the connector on the rear panel, matching the slit and pin, and turn the BNC plug clockwise to secure the connection.

SECTION 2
DISASSEMBLY

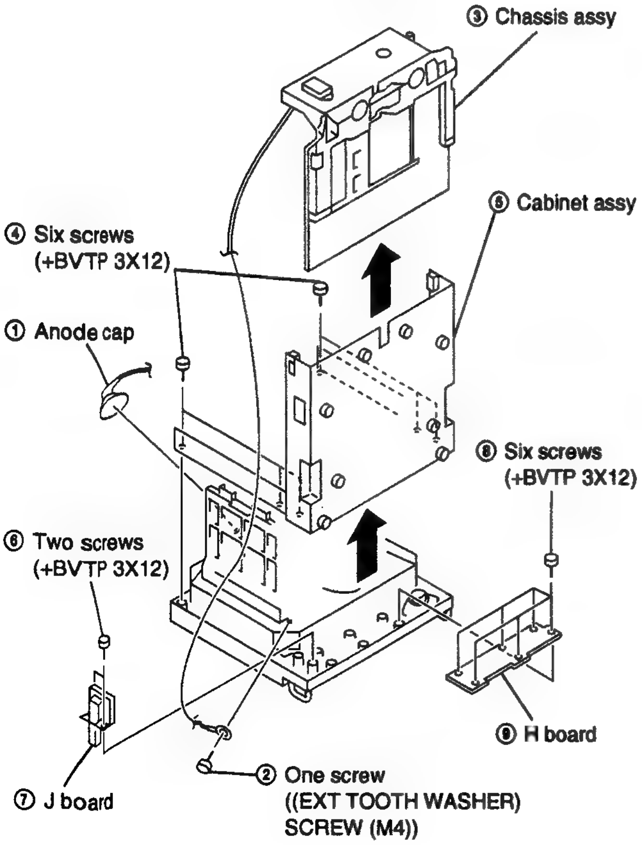
2-1. TOP COVER AND REAR COVER REMOVAL


① Three screws (CASE CLAW SCREW (OS))
③ Top cover
① Three screws (CASE CLAW SCREW (OS))
② Six nylon rivet
⑤ Rear cover
④ Four screws (+BVTP 4X16)

2-2. TERMINAL BOARD REMOVAL

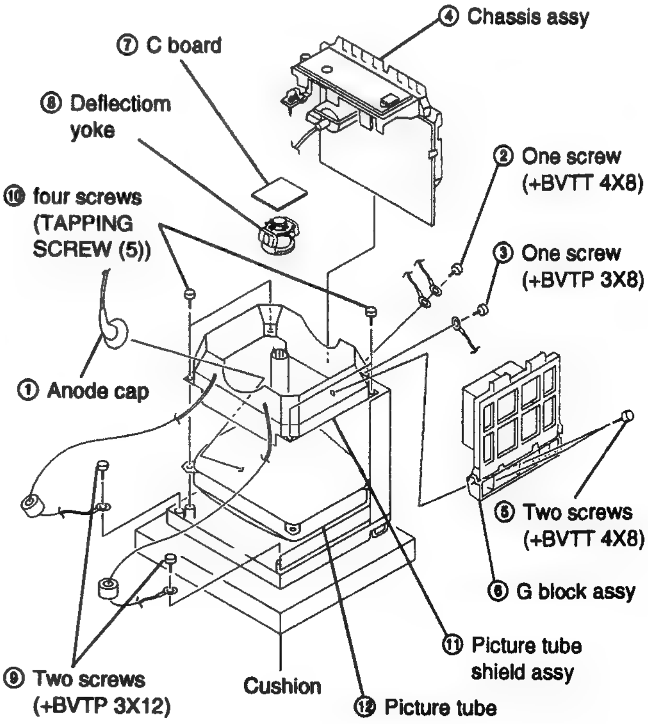


2-3. J AND H BOARDS REMOVAL

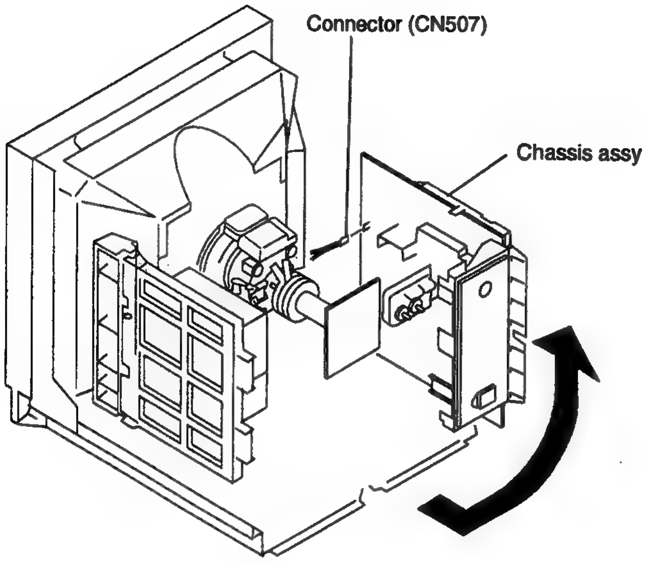

③ Chassis assy
⑤ Cabinet assy
④ Six screws (+BVTP 3X12)
① Anode cap
⑧ Six screws (+BVTP 3X12)
⑥ Two screws (+BVTP 3X12)
⑨ H board
⑦ J board
② One screw ((EXT TOOTH WASHER) SCREW (M4))

2-4. PICTURE TUBE REMOVAL

When exchange the Picture tube of PVM-14M4 series and if the magnet had stuck on the neck of the Picture tube, peel it.

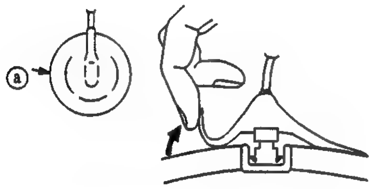


2-5. SERVICE POSITION

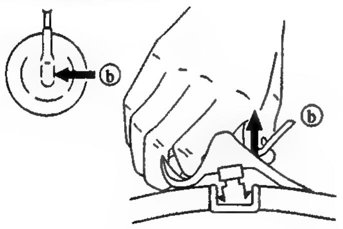


• REMOVAL OF ANODE-CAP

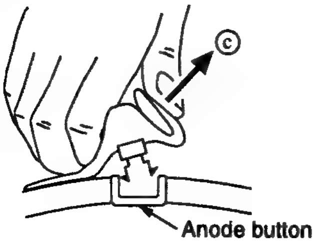
NOTE : Short circuit the anode of the picture tube and the anode cap to the metal chassis, CRT shield or carbon paint on the CRT, after removing the anode.



• REMOVING PROCEDURES



① Turn up one side of the rubber cap in the direction indicated by the arrow ⓐ.



② Using a thumb pull up the rubber cap firmly in the direction indicated by the arrow ⓑ.

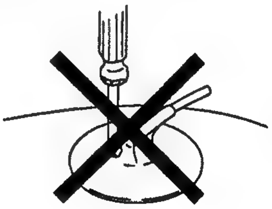
③ When one side of the rubber cap is separated from the anode button, the anode-cap can be removed by turning up the rubber cap and pulling up it in the direction of the arrow ⓒ.

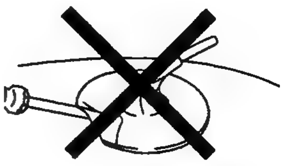
• HOW TO HANDLE AN ANODE-CAP

① Don't hurt the surface of anode-caps with sharp shaped material!

② Don't press the rubber hardly not to hurt inside of anode-caps! A material fitting called as shatter-hook terminal is built in the rubber.

③ Don't turn the foot of rubber over hardly! The shatter-hook terminal will stick out or hurt the rubber.





SECTION 3
SET-UP ADJUSTMENTS

3-1. PREPARATIONS (1)

Service Mode

This set is provided with a switch for service on the front panel that can be used to make various adjustments. The operation method of this switch is explained in detail below.

1. Entering the service mode

Simultaneously press the [ENTER] key and the [DEGAUSS] key shown on the display of the menu.

2. Service mode display

(1)	(5)	(4)	(3)	(6)
(2)				

Range of Service Mode Display

(1) The service items are largely classified into 16 types displayed by titles.
(2) The names of the service items or READ/WRITE guidance, etc., are displayed. The names are displayed to the left and the guidance to the right.
(3) This is the serial number for each of the service items. 1-120.
(4) This is the adjustment data for the service items that are now stored in the RAM. Adjustments can be made by changing these values, but as long as nothing is written to the ROM the adjustment values will be erased by turning off the power or by reading, so please be careful.
(5) When the adjustment data that is now displayed is identical with the data in the ROM, the cursor (▶) is displayed.
(6) The present status is displayed.
[*]: Writing to the ROM. Make sure not to turn off the power while this display is on.
[?]: ROM reading error. In this case, an image is output with the standard adjustment data that the microcomputer itself possesses.
[¿]: Problem in the I2C bus.

3. Finishing the service mode

Simultaneously press the [ENTER] key and the [DEGAUSS] key shown on the display of the menu.

4. Easy ON/OFF of the service mode

If once entering the service mode after having turned on the power, easy ON/OFF is possible by once more pressing the A, B or C switch on the front panel (the LED lights) as long as the power is not turned off or as long as the service mode is not finished.

5. Change of position of the service mode display

If the switch is continuously pressed when turning on in the above easy mode, the display position moves in the V direction. This method is used when the display is outside of the effective screen area.

6. Change of service items

The items are returned with the [MENU] key and forwarded with the [ENTER] key. When a key is continuously pressed, the operation will be repeated.

7. Change of service data

The service data is made larger with the [↑] key and smaller with the [↓] key. When continuously pressing the keys, the operation will be repeated.

8. Reading of service data

When reading data from the ROM to the RAM, press the [B / O] key once and check than the READ display is shown in the guidance, and then press the [B/O] key once again. The adjustment data that is written will return to its previous state, so please be careful.

9. Writing of service data

When writing data from the RAM to the ROM, press the [DEGAUSS] key once and check that the WRITE display shown in the guidance, and then press the [DEGAUSS] key once again. Not only the displayed data will be written, but all data, so please be careful.

10. Carrying out FACTORY RESETTING

In case the adjustment data has been destroyed for some reason, and you keep pressing the [B/O] key at the beginning of the above reading, the READ guidance will change to FACTORY RESET guidance in approximately 3 seconds so that the factory resetting can be carried out. By once again pressing the [B/O] key after this, resetting will be carried out ([*] will be displayed as status) and factory resetting will be executed. However, in case the data available at the time of shipment from the factory has been destroyed, or if the ROM has been replaced, etc., or if factory setting mentioned later on has been carried out, factory resetting is executed.

11. Carrying out FACTORY SETTING

Make sure to make possible the above factory resetting by making a copy of the adjustment data when replacing the ROM. If you keep pressing the [DEGAUSS] key at the beginning of the above writing, the WRITE guidance will change into FACTORY RESET guidance after approximately 3 seconds. By once again pressing the [DEGAUSS] key after this, setting will be carried out ([*] will be displayed as status) and the data will be copied. By carrying out this operation, the selection items of the menu and the adjustment values will be reset to the standard conditions, so please be careful. If this operation is carried out once, it cannot be carried out again, but the FACTORY SET FLAG (No. 120) in the service mode can be set to 1.

SERVICE MAP

※ Signify (The setting is vary with the destination.)
Refer to the "Table 3-1 Table map (2)."

Table 3-1 Table map (1)

No.	SERVICE ITEM		MAX	STD	No.	SERVICE ITEM		MAX	STD
1	NOR 50 DEF	H FREQUENCY	255	85	61	C/T1 D??	BIAS <RED>	1023	376
2		VIDEO PHASE	255	139	62		BIAS <GREEN>	1023	512
3		V SIZE	255	139	63		BIAS <BLUE>	1023	396
4	NOR 60 DEF	H FREQUENCY	255	96	64		GAIN <RED>	1023	660
5		VIDEO PHASE	255	115	65		GAIN <GREEN>	1023	620
6		V SIZE	255	137	66		GAIN <BLUE>	1023	602
7	NOR DEF	V CENTER	255	103	67		B/O <RED>	255	115
8		H SIZE	255	108	68		B/O <GREEN>	255	115
9		PIN PHASE	255	128	69	C/T2 D??	3200K SW	1	0
10		PIN AMP	255	128	70		BIAS <RED>	1023	256
11		LOWER PIN AMP	255	128	71		BIAS <GREEN>	1023	512
12		UPPER PIN AMP	255	128	72		BIAS <BLUE>	1023	512
13		SEXY	255	128	73		GAIN <RED>	1023	602
14		V LINEARITY	255	120	74		GAIN <GREEN>	1023	700
15		V BOW	63	32	75		GAIN <BLUE>	1023	672
16		LOWER BOW	63	32	76		B/O <RED>	255	95
17		V ANGLE	63	32	77		B/O <GREEN>	255	108
18	U/S DEF	V SIZE <50>	255	100	78	W/B	SUB CON <4 :3,NORMAL>	255	178
19		V SIZE <60>	255	100	79		SUB CON <4 :3,H/V DELAY>	255	97
20		H SIZE	255	118	80		SUB CON <16 :9,NORMAL>	255	150
21		PIN PHASE	255	128	81		SUB CON <16 :9,H/V DELAY>	255	78
22		PIN AMP	255	100	82		SUB BRIGHT	255	69
23	16 : 9 NOR DEF	V SIZE <50>	255	72	83		USER B/O <RED>	255	115
24		V SIZE <60>	255	60	84		USER B/O <GREEN>	255	115
25		PIN PHASE	255	135	85	OTHER	LANDING	255	64
26		PIN AMP	255	90	86		V HOLD	255	128
27	16 : 9 U/S DEF	V SIZE <50>	255	61	87		H BLANKING	255	73
28		V SIZE <60>	255	39	88		V BLANKING <50>	255	82
29		PIN PHASE	255	135	89		16 : 9 BLANKING START <50>	255	32
30		PIN AMP	255	65	90		16 : 9 BLANKING END <50>	255	176
31	COMPONENT	SUB PHASE	255	130	91		V BLANKING <60>	255	161
32		SUB CHROMA <NORMAL>	255	182	92		16 : 9 BLANKING START <50>	255	42
33		SUB CHROMA <SMPTE>	255	170	93		16 : 9 BLANKING END <50>	255	226
34		R-Y LEVEL	255	163	94		H DELAY	255	142
35	NTSC	BURST GATE PULSE WIDTH	255	52	95		V DELAY	255	104
36		CRYSTAL	255	59	96		HP POSITION	255	145
37		PHASE <NORMAL>	255	80	97		HP WIDTH <NORMAL>	255	148
38		PHASE <ACC OFF>	255	96	98		HP WIDTH <H/V DELAY>	255	62
39		B-Y PHASE	255	162	99	SYSTEM	SDI AUDIO	7	5
40		CHROMA <NORMAL>	255	98	100		358 TRAP FILTER	1	0
41		CHROMA <ACC OFF>	255	27	101		ACC	1	0
42		R-Y LEVEL	255	98	102		CAPTION VISION	7	0
43	NTSC 443	CRYSTAL	255	82	103		COMPONENT LEVEL	3	※
44		PHASE <NORMAL>	255	62	104		NTSC SETUP LEVEL	1	※
45		PHASE <ACC OFF>	255	64	105		CHROMA SET UP	1	0
46		B-Y PHASE	255	181	106		COLOR SYSTEM DISPLAY	3	0
47		CHROMA <NORMAL>	255	104	107		COLOR TEMPERATURE	3	0
48		CHROMA <ACC OFF>	255	36	108		USER PRESET	1	0
49		R-Y LEVEL	255	100	109		LANGUAGE	7	0
50	PAL	PHASE <NORMAL>	255	110	110		RGB SYNC	1	0
51		PHASE <ACC OFF>	255	105	111		OPTION BOARD	7	0
52		B-Y PHASE	255	122	112		AGING MODE	1	0
53		CHROMA <NORMAL>	255	109	113		PAL-M	1	0
54		CHROMA <ACC OFF>	255	41	114		MODEL	31	※
55		R-Y LEVEL	255	121	115		COLOR TEMP DISP 1	127	※
56	SECAM	CHROMA	255	93	116		COLOR TEMP DISP 2	127	※
57		R-Y LEVEL	255	181	117		REMOTE ADDRESS	63	0
58		COLOR BALANCE <R-Y>	255	118	118		RESERVED 1	1	0
59		COLOR BALANCE <B-Y>	225	135	119		RESERVED 2	2	0
60	C/T1 D??	3200K SW	1	0	120		FACTORY SET FLAG	1	0

Table 3-1 Table map (2)

Model Name	Component level	NTSC Set-up level	Model	Color temp disp 1	Color temp disp 2
PVM-20M4U	1	1	0	65	93
PVM-20M2U	1	1	1	65	93
PVM-20M4J	2	0	2	93	65
PVM-20M4E	2	0	3	65	93
PVM-20M2E	2	0	4	65	93
PVM-14M4U	1	1	5	65	93
PVM-14M2U	1	1	6	65	93
PVM-14M4J	2	0	7	93	65
PVM-14M1J	2	0	8	93	65
PVM-14M4E	2	0	9	65	93
PVM-14M2E	2	0	10	65	93
PVM-20M4A	2	0	11	65	93
PVM-14M4A	2	0	12	65	93
PVM-14M2A	2	0	13	65	93
PVM-14M4B	1	1	14	65	93
BVM-14M4DJ	2	0	15	93	65
BVM-14M4DE	2	0	16	65	93
PVM-20M4T	2	0	17	93	65
PVM-14M4T	1	0	18	93	65

3-2. Preparation (2). Initialization

* Supply composite video or component signals as shown in Table 3-2.

Table 3-2

Signal		Details of signal	Standard level P-W
Composite video	358NT 443NT	100% white	0.714V
		75% white	0.536V
	PALM PAL SECAM	100% white	0.7V
		75% white	0.525V
Component	BETA0	100% white Y	0.7V
		75% white Y	0.525V
		75%color B-Y, R-Y (P-P for this item only)	0.7V
	SMPTE	100% white Y	0.7V
		75% white Y	0.525V
		75%color B-Y, R-Y (P-P for this item only)	0.525V
Voice/sound		–5dBs	0.436Vrms

* Refer to Table 3-3 for groups of models.

Table 3-3

Group of models	Models		
1	PVM-14M4U PVM-14M4A	PVM-14M4J	PVM-14M4E
2	PVM-14M2U	PVM-14M2E	PVM-14M2A
3	PVM-14M1J		
4	PVM-20M4U PVM-20M4A	PVM-20M4J	PVM-20M4E
5	PVM-20M2U	PVM-20M2E	

* In this chapter, ☐ indicates the control items in the service mode.

Example: 60 H-FREQ

* Before turning off the power after adjustment in the service mode, write the adjustment data. When the power is turned off before writing, adjusted data will all be lost.

3-3. Writing model data

1. Write model data on respective models in the service mode at the location of No.114 MODEL in accordance with Table 3-4.

Table 3-4

Model	Model data
PVM-20M4U	0
PVM-20M2U	1
PVM-20M4J	2
PVM-20M4E	3
PVM-20M2E	4
PVM-14M4U	5
PVM-14M2U	6
PVM-14M4J	7
PVM-14M1J	8
PVM-14M4E	9
PVM-14M2E	10
PVM-20M4A	11
PVM-14M4A	12
PVM-14M2A	13

2. Write the following data in the service mode at the location of No.115 COLOR TEMP DISP 1.
COLOR TEMP DISP 1
U/C, AEP 65
J 93

3. Write the following data in the service mode at the location of No.116 COLOR TEMP DISP 2.
COLOR TEMP DISP 2
U/C, AEP 93
J 65

* Standard inspection state
Unless otherwise specified in this manual, make adjustment under the following conditions:

APERTURE	MIN	(Turn FLAT fully counterclockwise.)
BRIGHT	50%	(Center click)
CHROMA	50%	(Center click)
PHASE	50%	(Center click)
CONTRAST	80%	(Center click)
VOLUME	50%	

3-4. Picture output

1. AC input voltage setting

1. Input VIDEO signals and AUDIO signals to respective terminals on the connector panel.
2. Set the sliduck AC voltage as shown in Table 3-5.

Table 3-5

Group of models		Voltage

PVM-14M4J(J)
PVM-14M1J(J)
	PVM-20M4J(J)	AC 100±3V
		(Distortion factor:3% max.)

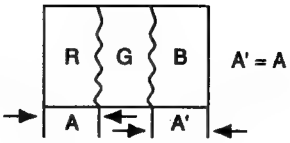
PVM-14M4U(U/C)
PVM-20M2U(U/C)
	PVM-14M2U(U/C)
	PVM-20M4U(U/C)
		AC 120±3V
		(Same as above)

PVM-14M4E(AEP)
PVM-14M2A(AUS)
PVM-20M4E(AEP)
PVM-20M4A(AUS)
	PVM-14M2E(AEP)
	PVM-14M4A(AUS)
	PVM-20M2E(AEP)
		AC 220±3V
		(Same as above)

3-5. Landing adjustment

1. CONT ... MAX
   BRT ... Conspicuous position
2. Roughly adjust the white balance, G2, and convergence.
3. Switch the rotary SW of the single color switch to change the color into green only.
4. Adjust the purity knob so that the green will come to the center of the screen. Make R and B almost identical. (Fig. 3-1)
5. Switch to B only, R only, and G only and verify each. (Figs.3-1, 3-2, and 3-3)
6. Bring the deflection yoke gradually forward and adjust the deflection yoke so that R and B on both sides of the screen will be green. (Fig.3-2 → Fig. 3-3)
7. If the deflection yoke comes forward too much, the pattern shown in Fig.3-4 will appear. If so, move the deflection yoke backward. (Fig.3-4 → Fig.3-3)
8. Switch the single color switch to B and verify the single color. (Fig.3-6)
9. Switch the single color switch to R and verify the single color. (Fig.3-9)
10. When two colors are mixed, set the mixed color as the standard, and repeat operations 6 and 7.
11. Switch to an all-white signal and check the uniformity.
12. When the deflection yoke position is determined, fasten it with the fixture.

Fig.3-1



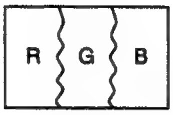


Fig.3-2

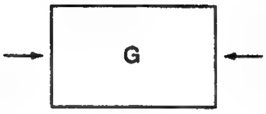


Fig.3-3

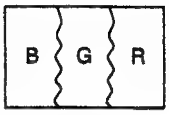


Fig.3-4

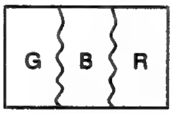


Fig.3-5

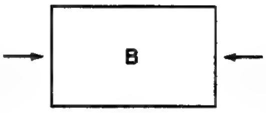


Fig.3-6

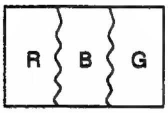


Fig.3-7

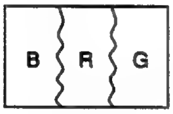


Fig.3-8

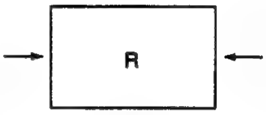


Fig.3-9

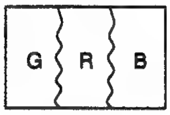


Fig.3-10

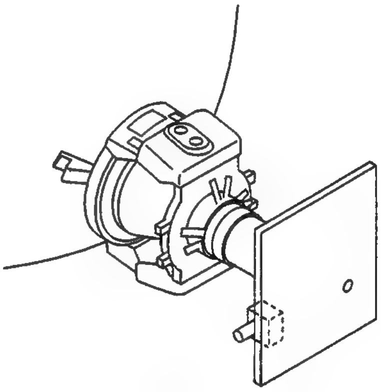


Fig.3-11

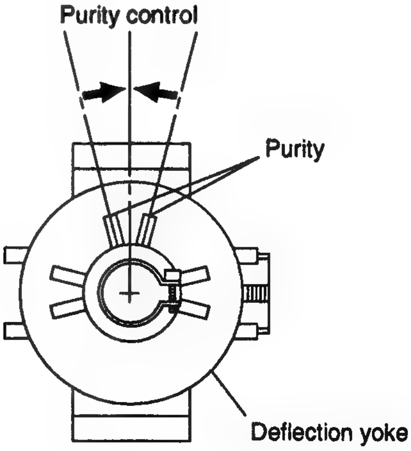


Fig.3-12

Note : Attach NTC magnets for 20M4 to the locations shown in Fig.3-13.

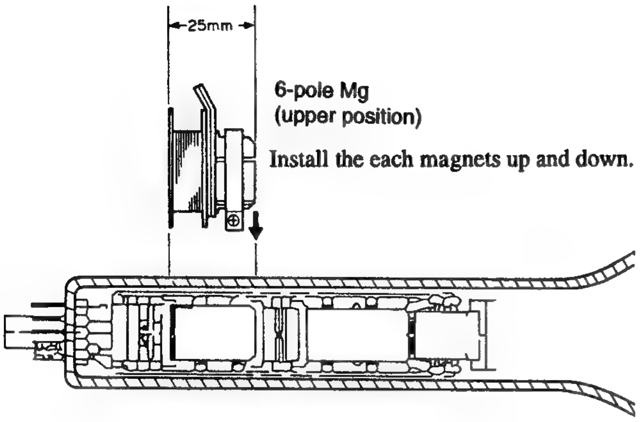


Fig. 3-13

3-6. Convergence adjustment (1)

1. Input a dot pattern signal.
   CONT ... Conspicuous position
   BRT ... MIN
2. Align the horizontal R, G, and B dots at the center of the screen with the H-START VR.

* When H-CENT is changed after H-STAT adjustment, readjust H-STAT. (H-STAT will change by means of H-CENT VR.)

3. Align the vertical location of R, G, and B in the center of the screen with the V-STAT Mg. (Fig.3-14, 3-15)

* After V-STAT adjustment, paint-lock the knob.

V-STAT Mg knob
While keeping the angles A and B equal (I = I'), align the vertical convergence.

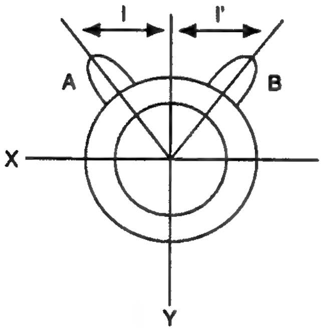


Fig. 3-14 Good example

If the A and B knobs are not symmetrical (I ≠ I'), the focus may deteriorate, beam striking or other adverse effects may occur.

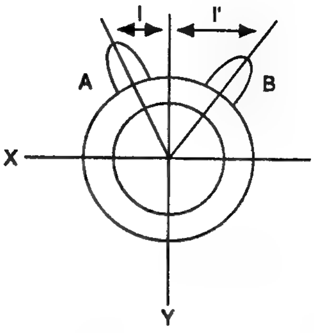
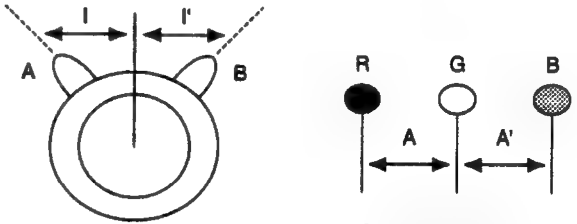


Fig. 3-15 Bad example

4. For HMC, use the BMC Mg to adjust the R and B dots so that they will be symmetrical horizontally with respect to the G dot.



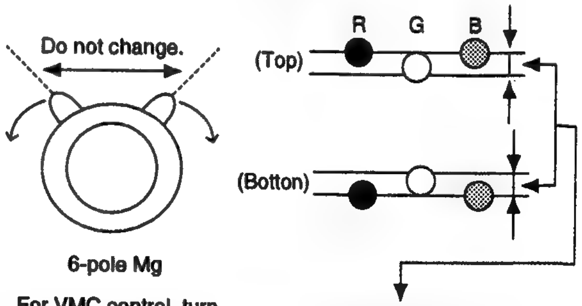
6-pole magnet

Change the opening degree of the BMC Mg to control the HMC.

Control the BMC Mg so that A=A'. Maintain I=I' when moving the Mg.

Fig. 3-16

5. For VMC, use the MBC Mg to adjust the R and B dots so that they will be symmetrical vertically with respect to the G dot.



6-pole Mg

For VMC control, turn knob to the right or left without changing ther opening degree of the BMC Mg.

Make adjustment so that the gap will be the same at the top and botton.

Fig. 3-17

6. Repeat adjustments 2. to 5.

- * The above adjustment may affect the landing, so after adjustment, check the landing again.

7. Paint-lock the knobs after adjustment.

3-7. Deflection yoke neck rotation adjustment

1. If there is nonconvergence on both sides of the X or Y axis of the screen, turn the neck of the deflection yoke in the direction of the arrow to hold the nonconvergence for the entire CRT screen within the tolerance.

- * Applicable only to groups of models 1, 2, 3, and 5.

(1) Reverse cross misconvergence pattern

Move the deflection yoke downward.

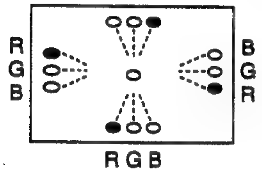


Fig. 3-18

(2) Regular cross misconvergence pattern

Move the deflection yoke upward.

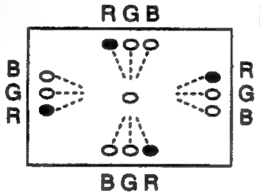


Fig. 3-19

(3) Pattern of left-sided deflection yoke

Move the deflcetion yoke to the right when viewed from the CRT screen.

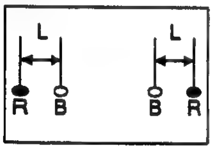


Fig. 3-20

(4) Pattern of right-sided deflection yoke

Move the deflection yoke to the left when viewed from the CRT screen.

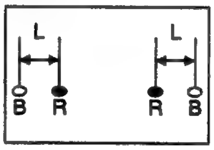


Fig. 3-21

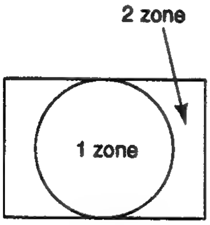
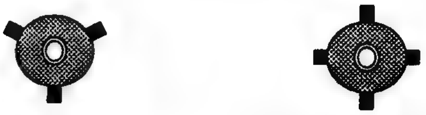


Fig. 3-23

2. Turn the neck of the deflection yoke to align the V pin vertically.

- * Applicable only to group of models 4.

3. Insert the wedge between the deflection yoke and CRT funnel to lock the deflection yoke. (Fig.3-24)

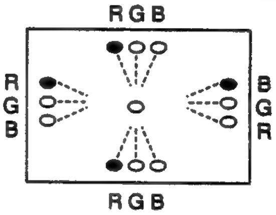


Groups of models 1,2,3,and 5 have been treated.

Group of models 4 have been treated.

Fig. 3-24

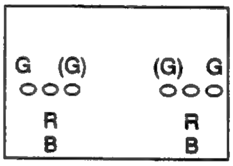
4. The following patterns cannot be corrected by turning the neck. (Figs.3-25, 3-26, and 3-27)



*Gun rotatuon

The X-axis and Y-axis beams are distorted on both sides.

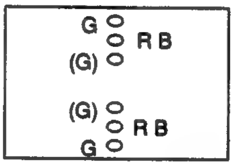
Fig. 3-25



*HCR Large(Small)

The horizontal portion of the G raster is wider(narrower) than that of the RB raster on both sides of the screen.

Fig. 3-26



*VCR Large(Small)

The vertical portion of the G raster is wider(narrower) than that of the RB raster on both sides of the screen.

Fig. 3-27

3-8. Convergence adjustment (2)

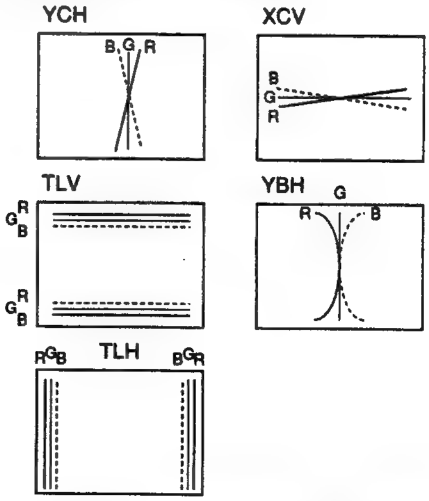


Fig. 3-28 Convergence compensation VR,coil,and compensator

Note : When adjustment is insufficient, use permalloy for perfect adjustment.

1. Group of models 4 (See Table 3-3.)

1. Input a cross-hatch signal.
2. Make adjustment with the TLV, YCH, YBH VR, and XCV coils of the deflection yoke to minimize nonconvergence.
3. When the nonconvergence of the TILT component is included in the horizontal convergence, make adjustment with the TLH compensator. (Fig.3-28)

2. Groups of models 1, 2, and 3 (See Table 3-3.)

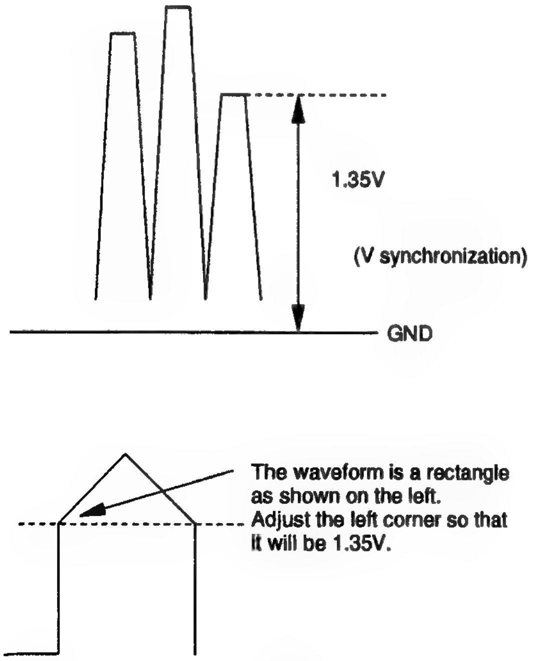
1. Input a cross-hatch signal.
2. Make adjustment with the TLV, YCH VR, and XCV coils of the deflection yoke to minimize nonconvergence.
3. When the nonconvergence of the TILT component is included inthe horizontal convergence, insert the TLH compensator into the deflection yoke for adjustment. (Fig.3-28)

3. Group of models 5 (See Table 3-3.)

1. Input a cross-hatch signal.
2. Make adjustment with the XCV coil of the deflection yoke to minimize nonconvergence.
3. When the nonconvergence of the TILT component is included in the vertical convergence, insert the TLV compensator into the deflection yoke for adjustment. (Fig.3-28)

3-9. G2 adjustment

1. Input a 525 monoscope signal.
2. Connect the probe of the oscilloscope to TP403 on the A board.
3. Measure the lowest reference pulse of the three.
4. Make adjustment with SCREEN VR so that the left end of the waveform will be 1.35 V±0.05 V.



The waveform is a rectangle as shown on the left. Adjust the left corner so that it will be 1.35V.

Fig. 3-29

3-10. White balance adjustment

1. Input a 525 monoscope signal. (Input from LINE A or B with no burst.)
2. Set as follows:
   CONT: 0%
   BRT: 50%
3. Adjust SUB-BRIGHT in the service mode so that the 20-tone gray scale will be as follows:
   0 and 5 IRE → Cut off
   10 IRE → Slight glow
4. Input 525 all-white (COMPOSITE signal without burst).
5. Set CONT VR to 80%.
6. Adjust the all-white luminance so that the screen luminance will be 3 NIT.
7. Press MENU and select COL TEMP/BAL.
8. Select 6500K.
   Set 3200K SW to "0" for both 9300K and 6500K.
9. Put the unit into the service mode.
10. Adjust to the standard values with <RED> and <BLUE> of C/T1 6500K BIAS or C/T2 6500K BIAS .
    Set cut-off to 3 NIT.

<GREEN>

Group of models (Table 3-3)	Fix as follows:
2, 3, 5	"400"
1, 4	"512"

11. Switch the all-white signal luminance to 100 IRE.
12. Adjust to the standard values with <RED> and <BLUE> of C/T1 6500K GAIN or C/T2 6500K GAIN .
    <Green>
    Set it to "700."
13. Repeat adjustment (10, 11, and 12) until the adjustment is complete, and then write the adjustment data.
14. Press MENU and select COL TEMP/BAL.
15. Select 9300K.
16. Adjust C/T2 9300K BIAS C/T2 9300K GAIN or C/T1 9300K BIAS C/T1 9300K GAIN in the same manner as adjustments 1013.

BIAS <GREEN>

Group of models (Table 3-3)	Fix as follows:
2, 3, 5	"400"
1, 4	"512"

GAIN <GREEN>
Fix it at "700."

3-11. Blue-only white balance adjustment

1. Turn ON the blue-only of the user controller SW. (To set blue-only.)
2. Input all-white (COMPOSITE signal without burst).
   The all-white signal luminance shall be 100 IRE.
   CONT: 80%
   BRT: 50%
3. Select COL TEMP/BAL.
4. Select 6500K.
5. Adjust to the standard values with C/T1 6500K B/O<RED> and C/T1 6500K B/O<GREEN> or C/T2 6500K B/O<RED> and C/T1 6500K B/O<GREEN> .
6. Select COL TEMP/BAL.
7. Select 9300K.
8. Adjust to the standard values with C/T2 9300K B/O<RED> and C/T2 9300K B/O<GREEN> or C/T1 9300K B/O<RED> and C/T1 9300K B/O<GREEN> .
9. Adjust the all-white signal luminance, and check that the white balance is satisfactory when the luminance of the screen is 8NIT.

3-12. SUB BRT adjustment

1. Input a 525 monoscope signal.
2. CONT ... MIN
   BRT .... CENTER (50&)
3. Select SUB BRIGHT in the service mode.
4. Adjust SUB BRIGHT so that 10 IRE glows slightly and 0 IRE is cut off.

3-13. Focus adjustment

1. PVM-20M4 Series

1. Adjust the H focus (upper side of focus pack) by means of a dot signal.
2. Adjust the V focus (lower side of focus pack) by means of a dot signal.
3. Turn the H focus fully clockwise when viewed from the front by means of a dot signal.
4. Turn the H focus counterclockwise and focus well the dot in the center of the screen. When the dot is well focused, it will be divided into two sections.
5. Turn the H focus VR clockwise (returning direction) so that the dot will be as shown in Fig.3-30. At that time, both ends of the central section of the screen are in the same state.

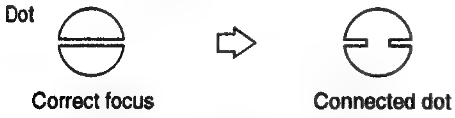


Fig. 3-30

6. Check that the resolution is more than 800 lines by means of a digital monoscope signal.
7. Check that the magenta ring is unconspicuous by means of an all-white signal.

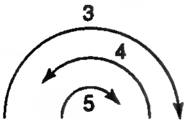


Fig.3-31 Movement of VR when viewed from the front

2. PVM-14M4 Series

1. Adjust the H focus (upper side of focus pack) by means of a dot signal.
2. Adjust the V focus (lower side of focus pack) by means of a dot signal.
3. Turn the H focus fully clockwise when viewed from the front by means of a dot signal.
4. Turn the H focus counterclockwise and focus the dot in the center of the screen well. The dot signal is divided into two sections at that time.
5. Turn the H focus VR counterclockwise so that the dost will be as shown in Fig.3-32. At that time, both ends of the central section of the screen are in the same state.

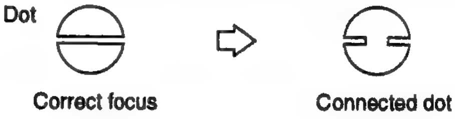


Fig. 3-32

6. Check that the resolution is more than 800 lines by means of a digital monoscope signal.
7. Check that the magenta ring is unconspicuous by means of an all-white signal.

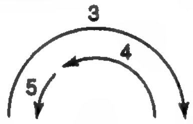


Fig.3-33 Movement of VR when viewed from the front

3. PVM-14M2 Series (CRT14MG)

Make adjustment so that the dots in the central section (right and left edges) will be undivided, respectively. (When well-focused, the dot is divided into two sections.)

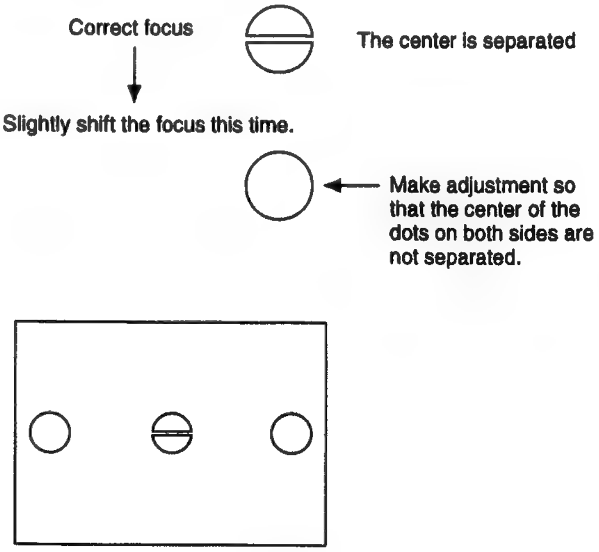

Correct focus
The center is separated
Slightly shift the focus this time.
Make adjustment so that the center of the dots on both sides are not separated.

Fig. 3-34

4. PVM-20M2 Series

Focus the character "30" in the center of monoscope well as usualy.

SECTION 4
SAFETY RELATED ADJUSTMENT

When the parts (with a☒ ,◪ mark on the circuit diagram) shown below are replaced, confirm the matters described in items 4-1 and 4-2 shown below.

☒ R1536
◪ R551, R506, R519, R518, R516, R515, R508, R517, R1560, R1537, C549, C512, C513, C523, C592, D501, D533, Q500, Q511, IC500, and IC507

When the following parts are replaced, check the +B voltage:
IC600, IC602, D610, C615, C631, C621, C632, and T603

Confirmation procedure

1. Input 120 VAC.
2. Input a monoscope signal, and minimize CONTRAST and BRIGHT.
3. Check that the voltage of the CN605 ④ pin is 115.7 VDC.

4-1. CONFIRAMATION OF +B MAXIMUM

Standard : Less than115.7 VDC(CN605 pin ④)
Check Condition Input voltage : 130 VAC
Note : Use NF Power Supply or make sure that distortion factor is 3% or less.
Input signal : Monoscope
Controls : BRT & CONT → Normal

4-2. CONFIRAMATION OF HOLD-DOWN CIRCUIT

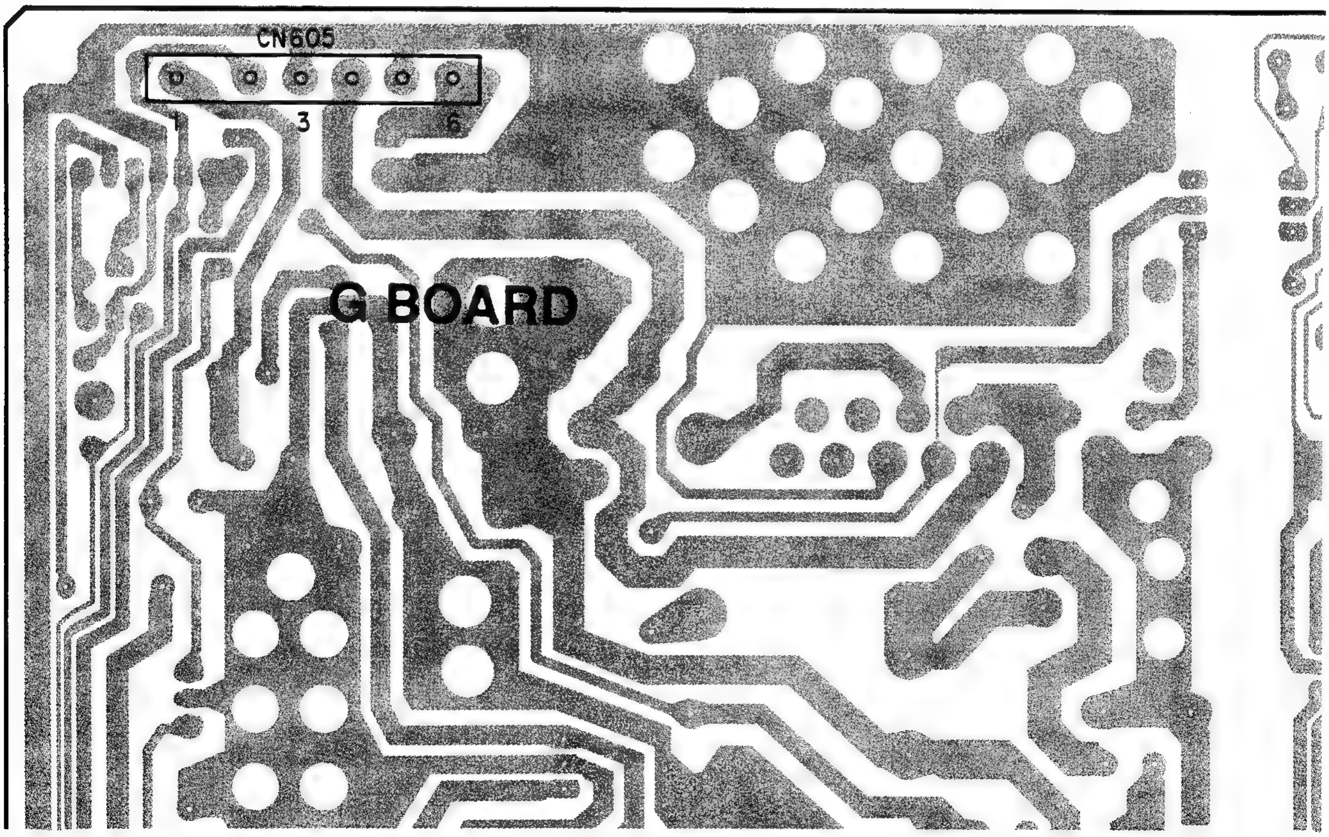
Check Condition Input voltage : 130 VAC
Input signal : White &Dot
Controls : BRT & Cont → Max. & Min.

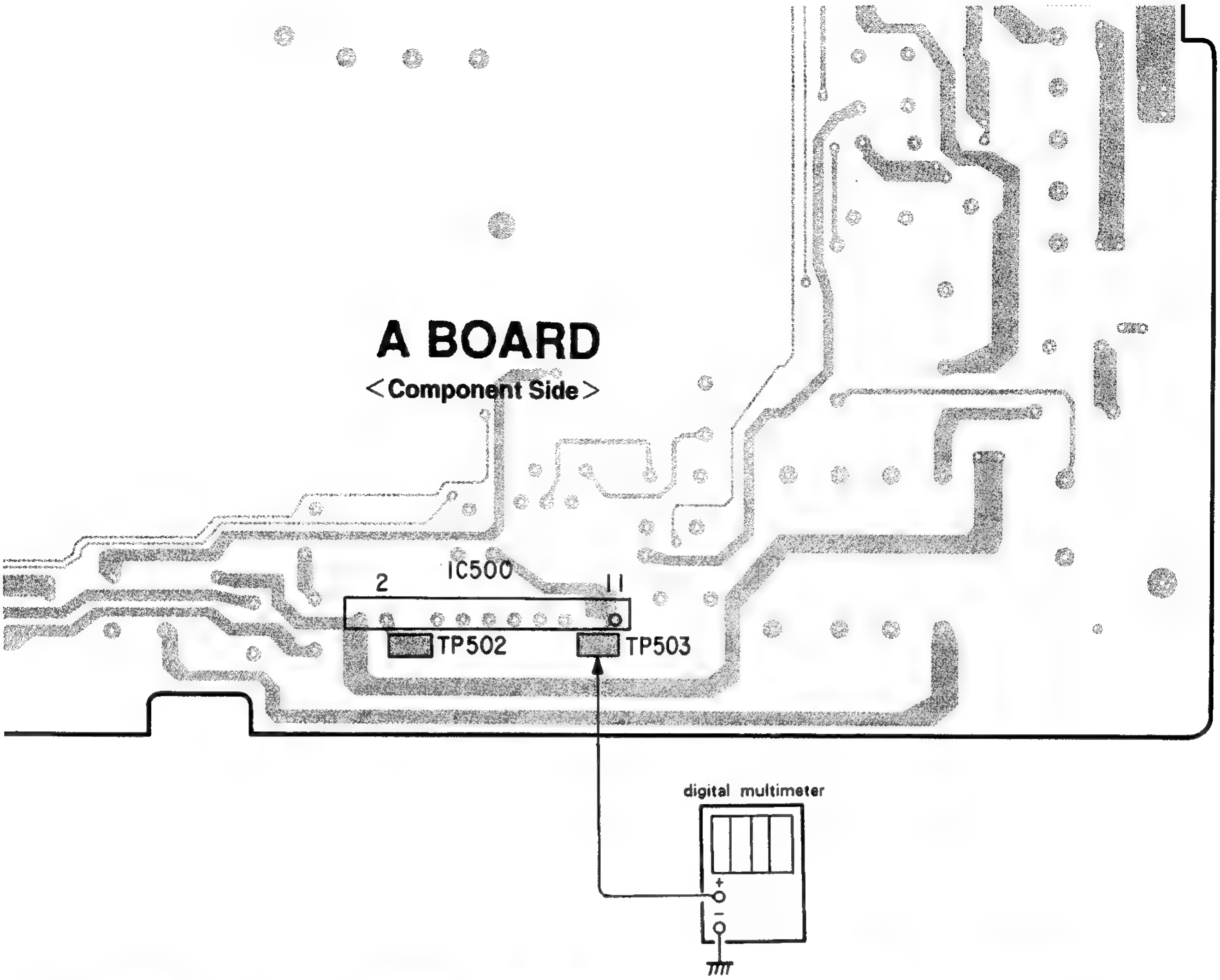
4-2-1.Hold-Down Circuit (+B)

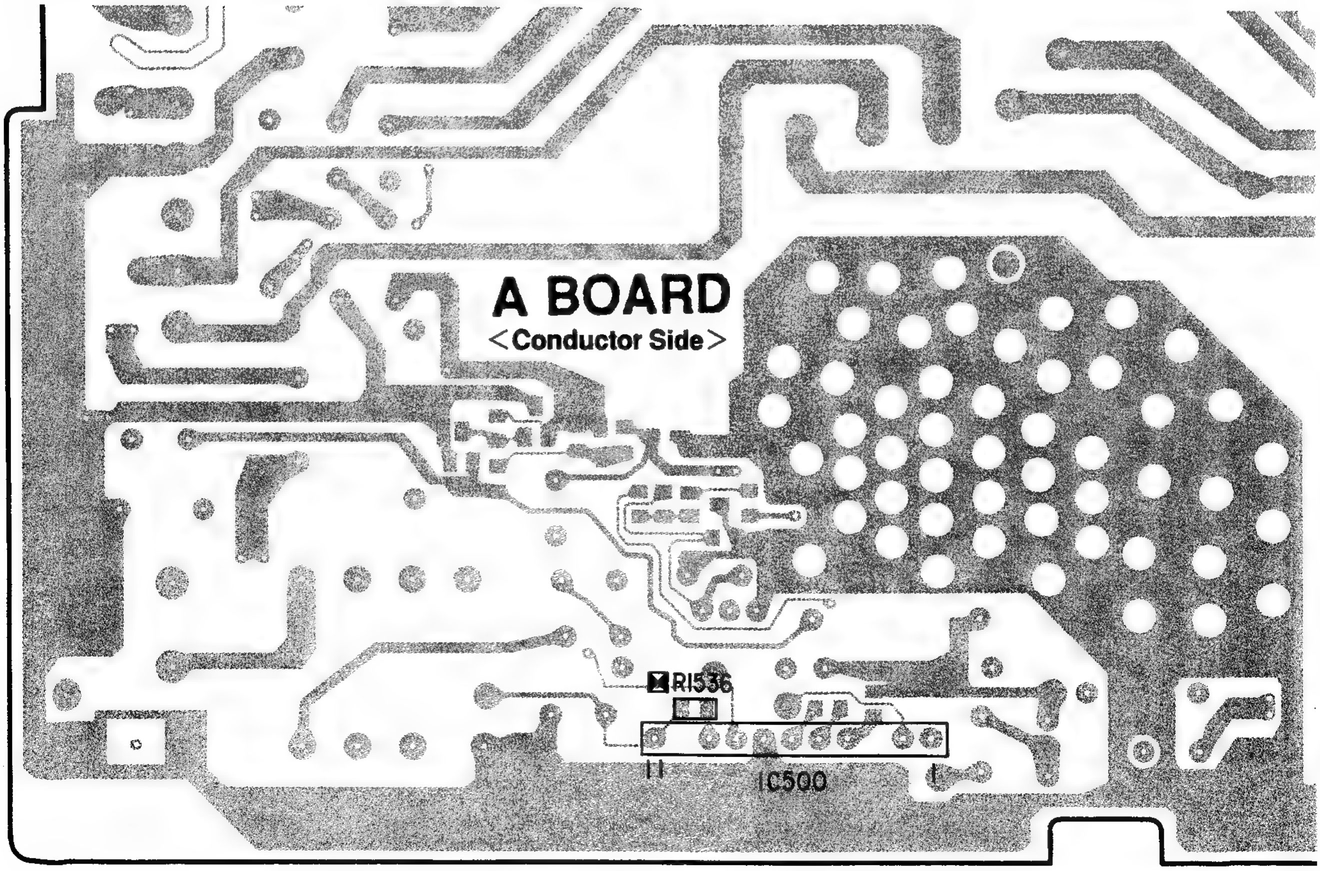
a) Adjust the beam current to 600±50μA with the pin ④ of CN605 with the external DC power supply (less than 127.0 VDC)to the point just before the hold-down circuit works.
Input Signal : White
b) Adjust the beam current to 80±20μA with the pin ④ of CN605 with the external DC power supply (less than 127.0 VDC)to the point just before the hold-down circuit works.
Input Signal : Dot

4-2-2. Hold-Down Circuit (3rd Wire voltage of FBT)

Check item : Check of pin ⑪ of IC500 voltage : more than 110.0VDC
a) Adjust the beam current to 600±50μA with the pin ⑪ of IC500 with the external DC power supply (less than 141.0 VDC)to the point just before the hold-down circuit works.
Input Signal : White
b) Adjust the beam current to 80±20μA with the pin ⑪ of IC500 with the external DC power supply (less than 141.0 VDC)to the point just before the hold-down circuit works.
Input Signal : Dot

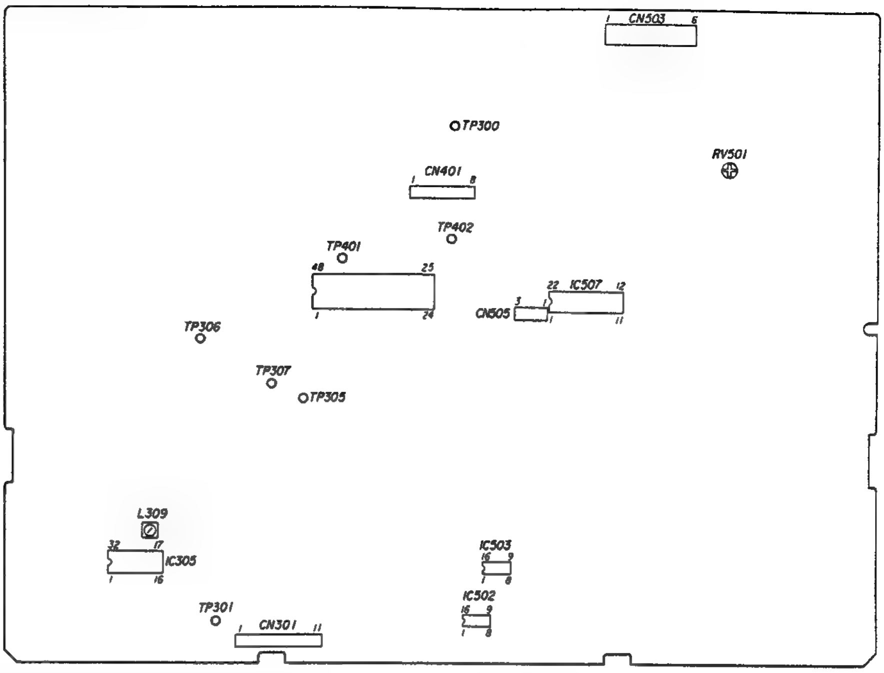



A BOARD
<Component Side>
IC500
2
11
TP502
TP503
digital multimeter
+
–


A BOARD
<Conductor Side>
R1536
11
IC500
1

SECTION 5
CIRCUIT ADJUSTMENTS

5-1. A BOARD ADJUSTMENT



1. PREPARATION/SIGNAL SPECIFICATIONS

1. Signal specifications

* Supply a composite video or component signals from the CN301 connector. Refer to Table 5-1 to take into consideration the effect on the Q board.
The level of the signal to supply should equal to values shown in Table 5-1 plus/minus 2% max.

Table 5-1

Signal		Details ofsignal	Standard level (Pedestal white)	Reduction rate %	Connector supply level (P·W)
Composite video (75% color bar)	358NT 443NT	100% white	0.714V	93%	0.664V
		75% white	0.536V	〃	0.498V
		Burst (Green section) (P-P for this item only)	286mV (632mV)	94% (94%)	269mV (594mV)
	PAL SECAM PAL M	100% white	0.7V	〃	0.651V
		75% white	0.525V	〃	0.488V
		PAL burst (Green section) (P-P for this item only)	300mV (664mV)	94% (94%)	282mV (624mV)
Component (75% color bar)	BETA 0	100% white	0.7V	94.8%	0.664V
		75% white	0.525	〃	0.498V
		75% color B-Y, R-Y (P-P for this item only)	0.7V	〃	0.664V
	SMPTE	100% white	0.7V	〃	0.664V
		75% white	0.525V	〃	0.498V
		75% color B-Y, R-Y (P-P for this item only)	0.525	〃	0.498V

2. Preparation

* In this chapter, ☐ indicates the control items in the service mode.
Example: 60 H-FRQ

Write the applicable model data at the location of NO.114 MODEL in the service mode.
Group of models 4 ... 0
Group of models 5 ... 1
Group of models 1 ... 5
Group of models 2 ... 6
Group of models 3 ... 8

* Refer to Table 5-2 for the following groups of models.

Table 5-2

Group of models	Models		
1	PVM-14M4U PVM-14M4A	PVM-14M4J	PVM-14M4E
2	PVM-14M2U	PVM-14M2E	PVM-14M2A
3	PVM-14M1J		
4	PVM-20M4U PVM-20M4A	PVM-20M4J	PVM-20M4E
5	PVM-20M2U	PVM-20M2E	

* CONT 80% is the center click position of the user controller.

2. ADJUSTMENT OF DEFLECTION SYSTEM

1. Adjustment of horizontal oscillation frequency

1. Input a 525 monoscope signal.
2. CONT ... 80%
   BRT 50%
3. Set the unit in the service mode.

4. Connect the IC507 ① PIN on the A board to GND via the 100μ/16V chemical capacitor. (Use CN505③ PIN for GND.) Or insert the H-FREQ jig into CN505.

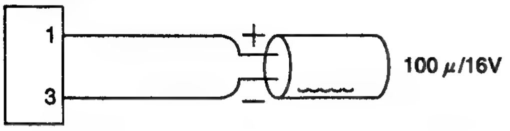
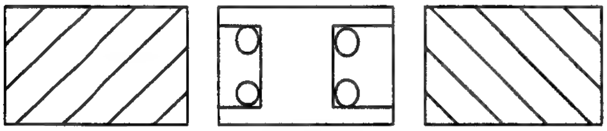


Fig.5-1 H-FREQ jig

5. Adjust 60 H-FREQ so that the slanting lines on the screen will be vertical. (Fig.5-2)
6. Input a 625 monoscope signal.
7. Adjust 50 H-FREQ so that the slanting lines on the screen will be vertical. (Fig.5-2)



Fo:Low Fo:Optimal Fo:High

Fig.5-2

2. H BLANKING adjustment

1. Input a 525 monoscope signal.
2. CONT ... 80%
   BRT 50%
3. Set the unit in the service mode.
4. Observe the anode of TP300 or D516 with an oscilloscope, and adjust H-BLANKING so that the waveform will be as shown in Fig.5-3.

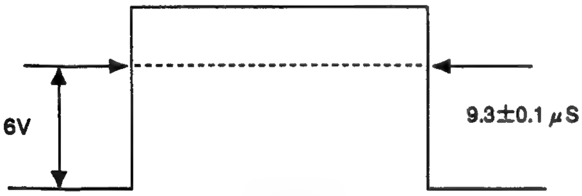


Fig.5-3

3. Picture phase adjustment

1. Input a 525 monoscope signal.
2. Set the unit in the UNDER SCAN mode.
3. CONT ... Min.
   BRT .... Max.
4. Set the unit in the service mode.
5. Adjust U/N H-SIZE so that the white frame of the monoscope will be approx. 1 cm to the inside of the effective screen.
6. Turn RV501 (H-CENT) so that B = B'.
7. Adjust 60 VIDEO PHASE so that the signal area will be in the center (A = A') of the deflection area. (Fig.5-4)
8. Input a 625 monoscope signal.
9. Adjust 50 VIDEO PHASE in the same manner.

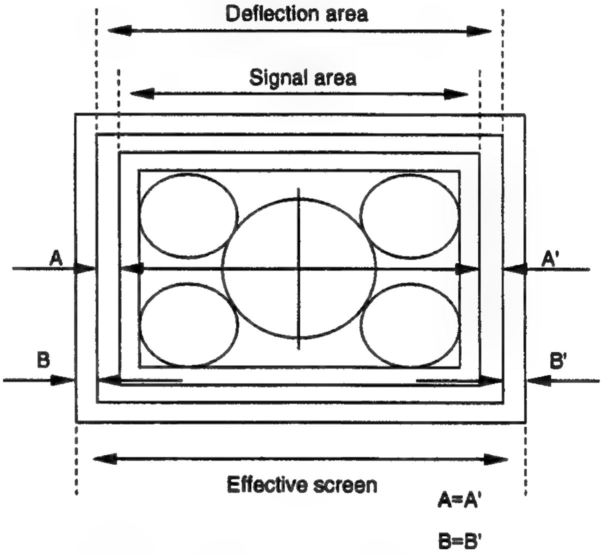


Fig.5-4

4. V BLANKING adjustment

1. Input a 525 monoscope signal.
2. Set the unit in the UNDER SCAN mode.
3. CONT ... Min.
   BRT ... Max.
4. Set the unit in the service mode.
5. Adjust V-BLANKING <60> so that the white frame in the upper section of the monoscope will be about to be blanked.

Note : Blanking up to the point 1H away from the white frame is permissible, but the adjusting center should be up to the point 0.5H away from the frame.

6. Cancel the UNDER SCAN mode, and set the unit in the normal 16:9 mode.
7. Adjust 16:9 BLANKING START<60> and 16:9 BLANKING END<60> so that the number of frames in the vertical direction in the luminous section of the screen will be 11.74 and the BLK quantity at the top and bottom will be the same.

Note : Make adjustment before 16:9 V-SIZE adjustment.

8. Input a 625 monoscope signal.
9. In the same way as 5. shown above, adjust V-BLANKING <50>.
10. Adjust 16:9 BLANKING START<50> and 16:9 BLANKING END<50>, in the same was as 6. and 7., so that the number of frames in the vertical direction in the luminous section of the screen will be 11.2 and the BLK quantity at the top and bottom will be the same.

5. Vertical deflection adjustment

1. Input a 525 monoscope signal.
2. CONT ... 80%
   BRT ... 50%
3. Set the unit in the service mode.
4. Roughly adjust NOR 60 V.SIZE so that the size will be 12 frames.
   Adjust V.LIN with V.LIN.
   Adjust CENT with V.CENT.
   V.CENT must be reviewed after adjustment of V.LIN.
   Adjust NOR 60 V.SIZE so that it will equal the standard value.
5. Set the unit in the 16:9 mode by the user controller SW.
6. Make the same adjustment with 16:9 NOR V.SIZE <60>.
7. Set the unit in the NORMAL SCAN mode.
8. Input a 625 signal.
9. Adjust NOR 50 V.SIZE so that the SIZE will equal the standard value.
10. Set the unit in the 16:9 mode.
11. Adjust 16:9 NOR V.SIZE <50> so that it will equal the standard value.

Table 5-3 NORMAL V. SIZE standard

		525	625
4 : 3		11.75±0.2 frames	11.2±0.2 frames
16 : 9	14"	154mm	←
	20"	217mm	←

6. Horizontal deflection adjustment (Normal scan adjustment)

1. Input a 525 monoscope signal.
2. CONT ... 80%
   BRT 50%
3. Set the unit in the service mode.
4. Rough adjustment of H.SIZE
   Roughly adjust NOR H.SIZE so that H.SIZE will be 15.75 frames.
5. Adjust the horizontal deflection by means of NOR PIN AMP, NOR PIN PHASE, NOR U.PIN AMP, SEXY, V BOW, V ANGL, NOR H SIZE, L PIN AMP, and L V BOW.
   (While correcting a distorted parallelogram and curvature with V.ANGL and BOW, make adjustment so that the horizontal and vertical lines of the screen will be straight.)
6. Set the unit in the 16:9 mode.
7. Make the same adjustment as 5. with 16:0 NOR PIN AMP and 16:9 NOR PIN PHASE

Table 5-4 NORMAL H. SIZE standard

	525	625
4 : 3	11.75±0.2 frames	15.0±0.2 frames
16 : 9	11.75±0.2 frames	15.0±0.2 frames

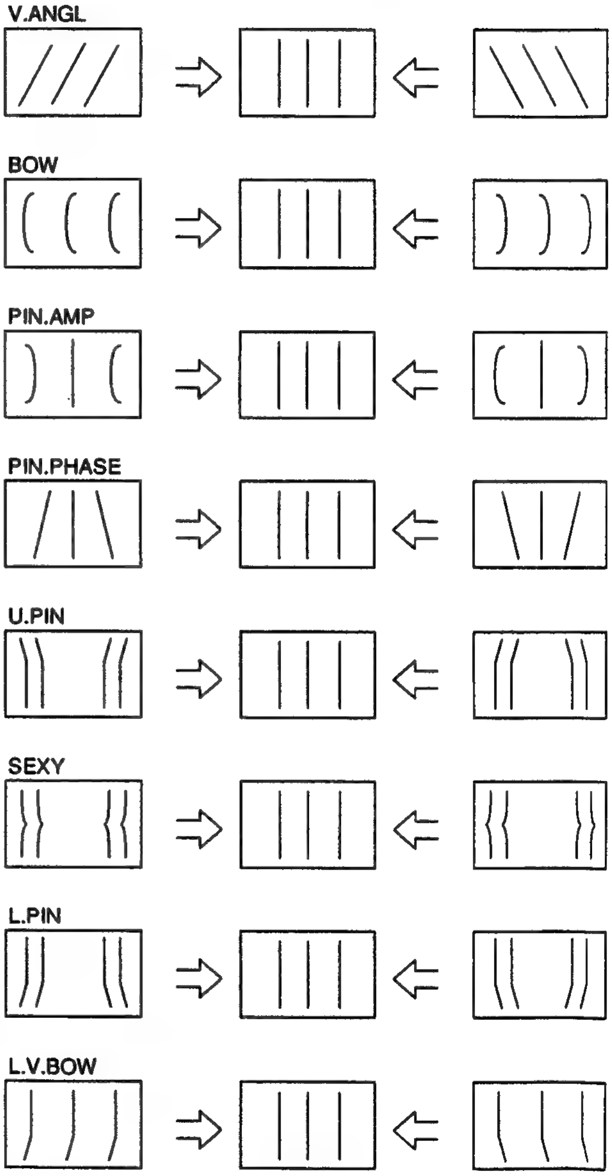


Fig.5-5

7. Horizontal deflection adjustment (UNDER SCAN adjustment)

1. Input a 525 monoscope signal.
2. CONT ... 80%
   BRT 50%
3. Set the unit in the U/S mode.
4. Set the unit in the service mode.
5. Adjust U/S V SIZE <60> so that UNDER V.SIZE will be within the standard.
6. Adjust U/S H SIZE so that UNDER H.SIZE will be within the standard.
7. Adjust U/S PIN AMP and U/S PIN-PHASE. (Adjust tracking according to 5., 6., and 7.)
8. After adjustment, the white frame of the monoscope shall not be out of the effective screen.
9. Set the unit in the 16:9 mode.
10. Make the same adjustment with 5. and 7. by means of 16:9 U/S V SIZE <60>, 16:9 U/S PIN-AMP and 16:9 U/S PIN-PHASE.

Table 5-5
Standerd values for groups of models 1, 2, and 3 (14")

	525	625
U/S H-SIZE V-SIZE	252mm 188mm	←
16 : 9 U/S V-SIZE	142mm	←

Table 5-6
Standerd values for groups of models 4 and 5 (20")

	525	625
U/S H-SIZE V-SIZE	364mm 272mm	←
16 : 9 U/S V-SIZE	205mm	←

11. Set the unit in the 16:9 mode.
12. Input a monoscope signal.
13. Make the same adjustment with 5. by means of U/S V SIZE <50>.
14. Set the unit in the 16:9 mode.
15. Make the same adjustment with 5. by means of 16:9 U/S V SIZE <50>.

Note : If there is not time enough for adjustment (5. Vertical deflection adjustment and 6. and 7. Horizontal deflection adjustment), confirm that the respective sections will operate normally and that adjustment is possible, and then input standard adjustment values.

8. H/V-DELAY adjustment

Note : This item applies only to groups of models 1, 2, 4, and 5.

8-1. H-DELAY adjustment

1) Input a 525 monoscope signal.
2) CONT ... 80%
   BRT 50%
3) Set the unit in the H/V DELAY mode.
4) Set the unit in the service mode.
5) Connect the probe of an oscilloscope to IC503 ⑦ PIN. Adjust H DELAY so that the output waveform will be as shown in Fig.5-6.

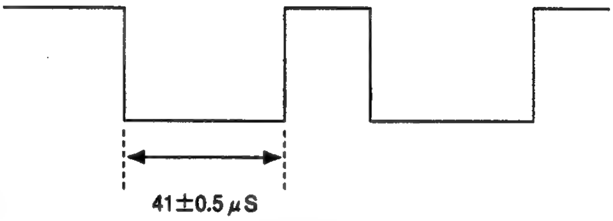


Fig.5-6

8-2. V-DELAY adjustment

1) Input a 525 monoscope signal.
2) CONT ... 80%
   BRT 50%
3) Set the unit in the H/V DELAY mode.
4) Set the unit in the service mode.
5) Connect the probe of an oscilloscope to IC502 ⑦ PIN. Adjust V DELAY so that the output waveform will be as shown in Fig.5-7.

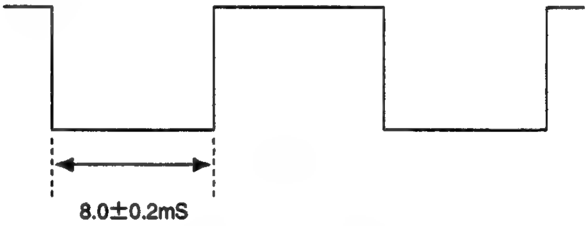
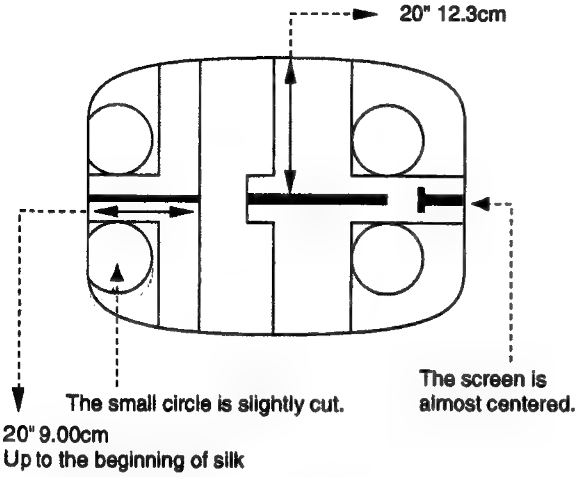


Fig.5-7

8-3. Confirmation of screen

Confirm that the screen is as shown in Fig.5-8.



20" 12.3cm

The small circle is slightly cut.

The screen is almost centered.

20" 9.00cm
Up to the beginning of silk

Fig.5-8

9. Writing adjustment results

Write the adjustment results.

Note : Do not turn off the power before writing the adjustment results; otherwise, they will all be lost.

3. Signal system adjustment

1. SUB CON adjustment during NORM and H/V DL

Note : H/V-DL is not applicable to the group of models 3. Adjustment must be completed before the HUE adjustment of NTSC358/443.PAL.

1. Input a vertical white line signal.

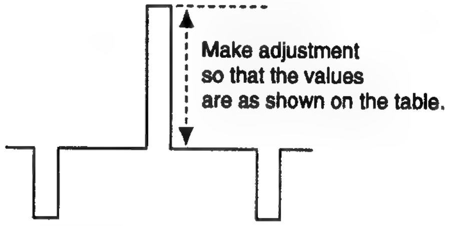
Note : Use a vertical white line signal (without 525 burst; H width of 3µS; 100IRE).

2. CONT ... 80%
   BRT 50%
3. Connect the probe of an oscilloscope to CN401 ③ PIN on the A board.
4. Set the unit in the service mode.
5. Temporarily input "69" as an adjustment value for SUB.BRIGHT. Set the values in Table 5-7 as BIAS and GAIN data of C.TEMP1 and C.TEMP2.

Table 5-7

Group of models	1, 4	2, 3, 5
BIAS GREEN	512	400
GAIN GREEN	700	700

6. Adjust the pedestal or the distance between SYNCTIP and WHITE by means of SUB CON <4:3, NOR>, SUB CON <4:3, H/V DELAY, SUB CON <16:9, NOR>, and SUB CON <16:9, NOR>.
   SUB CON <4:3. NOR>
   SUB CON <16:9. NOR> (Fig.5-9)



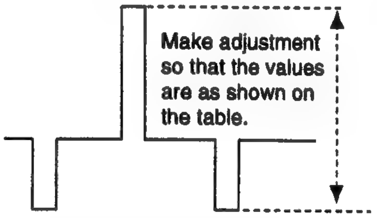
Make adjustment so that the values are as shown on the table.

SUB-CON 4:3. H/V-DL
SUB-CON 16:9. H/V-DL

Group of models	4	1	5	2	3
4 : 3	1.39Vp-p	1.16Vp-p	1.37Vp-p	1.47Vp-p	1.47Vp-p
16 : 9	1.22Vp-p	1.04Vp-p	1.19Vp-p	1.32Vp-p	1.32Vp-p

Fig. 5-9

SUB CON <4:3. H/V DELAY>
SUB CON <16:9. H/V DELAY> (Fig.5-10)



Make adjustment so that the values are as shown on the table.

SUB-CON 4:3. H/V-DL
SUB-CON 16:9. H/V-DL

Group of models	4	1	5	2
4 : 3	1.39Vp-p	1.16Vp-p	1.37Vp-p	1.47Vp-p
16 : 9	1.22Vp-p	1.04Vp-p	1.19Vp-p	1.32Vp-p

Fig. 5-10

Note : Not applicable to PVM-14M1J

2. SUB PHASE adjustment

Note : Not applicable to the group of models 3.

1. Input a component color bar (R-Y) and EXT SYNC. (BETA 0 level signal)
2. Set the unit in the EXT SYNC mode for component input.
3. Connect the probe of an oscilloscope to IC404 ㉚ PIN or TP402.
4. Set the unit in the service mode.
5. Adjust SUB PHASE so that the output waveform will be minimum (15 mVp-p or less). (Fig.5-11)

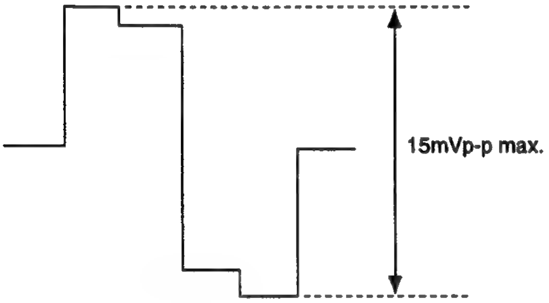


Fig. 5-11

3. SUB PHASE adjustment

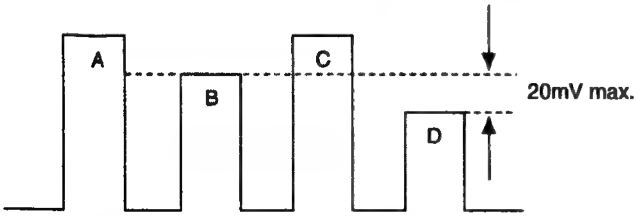
Note : Not applicable to groups of models 1, 2, 4, and 5.

1. Input an NTSC color bar.
2. Connect L309 to GND and TP307 to 5V line (L320 line), respectively.
3. Set the unit in the service mode.
4. Adjust SUB PHASE so that the output waveform will be minimum (15 mVp-p or less). (Fig.5-11)

4. SUB CHROMA adjustment

Note : Not applicable to the group of models 3.

1. Input component color bars (R-Y, Y, and B-Y). (BETA 0 level signal)
2. Set COMPONENT LEVEL to BETA 0 via MENU.
3. Connect the probe of an oscilloscope to IC404 ㉚ PIN or TP402.
4. Set the unit in the service mode.
5. Adjust SUB CHROMA NORMAL so that the peaks of waveforms will be flush with each other as shown in Fig.5-12.



Make B flush with D

Fig. 5-12

5. SUB COL adjustment

Note : Not applicable to groups of models 1, 2, 4, and 5.

1. Set the unit in the service mode.
2. Input adjustment value 98 to SUB CHROMA NORMAL. (Fig.5-12)

6. R-Y LEVEL adjustment

Note : Not applicable to the group of models 3.

1. Input component color bars (R-Y, Y, and B-Y). (BETA 0 level signal)
2. Set COMPONENT LEVEL to BETA 0 via MENU.
3. Connect the probe of an oscilloscope to IC404 ㊶ PIN or TP401.
4. Set the unit in the service mode.
5. Adjust R-Y LEVEL COMPONENT so that the peaks of waveforms will be flush with each other as shown in Fig.5-13.

Make adjustment so that B = D as shown above. (20 mV max.)
Check that the difference between B and C is 30 mV or less.

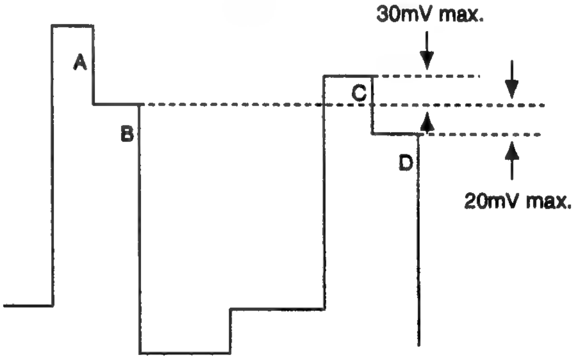
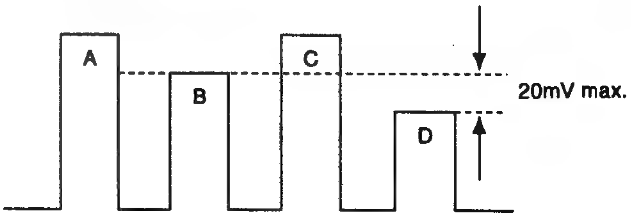


Fig. 5-13

7. SUB CHROMA N10/SMPTE

Note : Not applicable to the group of models 3.

1. Input component color bars (R-Y, Y, and B-Y). (SMPTE level signal)
2. Set COMPONENT LEVEL to N10/SMPTE via MENU.
3. Connect the probe of an oscilloscope to IC404 ㉚ PIN or TP402.
4. Set the unit in the service mode.
5. Adjust SUB CHROMA SMPTE so that the levels of B and D will be the same. (Fig.5-14)



Make B flush with D

Fig. 5-14

8. Adjustment of burst gate pulse width

1. Input an NTSC color bar.
2. Connect the probe of an oscilloscope to TP301 (COMP-SYNC) and Q363 (E) or IC305 ① PIN. (Exercise care since IC305 (1) PIN is a high-impedance line.)
3. Set the unit in the service mode.
4. Adjust BGP WIDTH so that the output waveforms will be as shown in Fig.5-15.

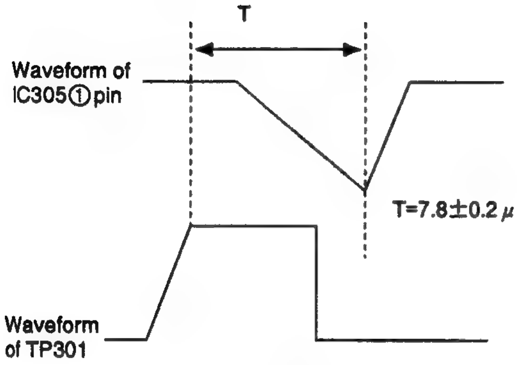


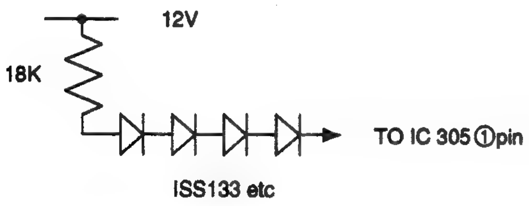
Fig. 5-15

9. VXO adjustment

9-1. X'tal 358

1) Input an NTSC color bar.
2) Connect a frequency counter to IC305 ㉑ PIN.
3) Set the unit in the service mode.
4) Connect IC305 ① PIN as shown in Fig.5-16.
5) Adjust NTSC CRYSTAL so that the counter reading will be within the standard values shown below. (Adjustment may be made at a point at which the color flickering stops.)

X'tal 358 standard vlaue: 3579545±20 Hz



(Arrange 4 Di's as close as possible to ①PIN at the shortest possible distance.)

Fig. 5-16

9-2. X'tal 443

1) Input a 443 NTSC color bar.
2) Connect a frequency counter to IC305 ㉑ PIN.
3) Set the unit in the service mode.
4) Connect IC305 ① PIN in the same way as 9.-4) in 9. VXO adjustment.
5) Adjust NTSC 443 CRYSTAL in the same way as 9.-5) in 9. VXO adjustment.
   X'tal 443 standard value: 4433619±20 Hz

10. NTSC · NTSC443 · PAL color demodulation adjustment

Note : 10-1. is not applicable to the group of models 3.

10-1. NT358PHASE (NORMAL)

1) Input an NTSC color bar.
2) Connect the probe of an oscilloscope to TP306.
3) Set the unit in the H/V DELAY mode.
4) Set the unit in the service mode.
5) Adjust PHASE NTSC 358 NOR so that the burst section of the output waveform will be straight. (Fig.5-17)

10-2. NT 358 PHASE (ACC OFF)

1) Conduct ACC OFF via MENU.
2) Make adjustment in the same way as 10-1. shown above by means of PHASE NTSC 443 ACC OFF. (Fig.5-17)

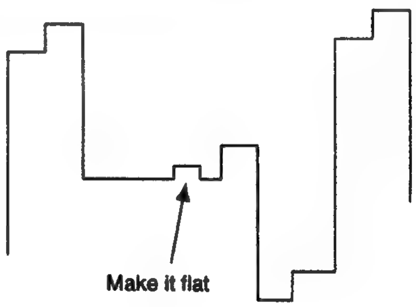


Fig. 5-17

10-3. NT 358 B-Y PHASE

Note : Make adjustment after PHASE adjustment and before CHROMA adjustment.

1) Input an NTSC color bar. (Input only the R-Y component. B-Y and Y should be OFF.)
2) Connect the probe of an oscilloscope to TP305.
3) Set the unit in the service mode.
4) Adjust B-Y PHASE NTSC 358 so that the color components will be straight.

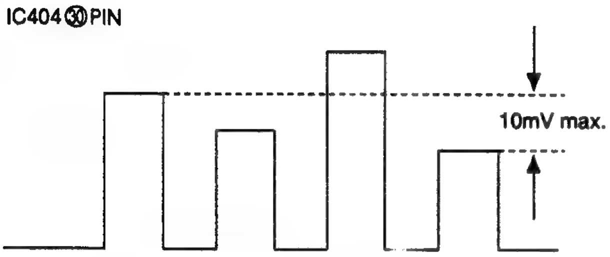
10-4. NT 358 CHROMA (NORMAL)

1) Input an NTSC color bar.
2) Connect the probe of an oscilloscope to IC404 ㉚ PIN or TP402.
3) Set the unit in the service mode.
4) Adjust CHROMA NTSC 358 NOR so that the peaks of waveforms will be flush with each other as shown in Fig.5-18.

10-5. NT 358 CHROMA (ACC OFF)

Note : 10-5. is not applicable to the group of models 3.

1) Conduct ACC OFF via MENU.
2) Adjust CHROMA NTSC 358 ACC OFF in the same way as 10-4. shown above. (Fig.5-18)



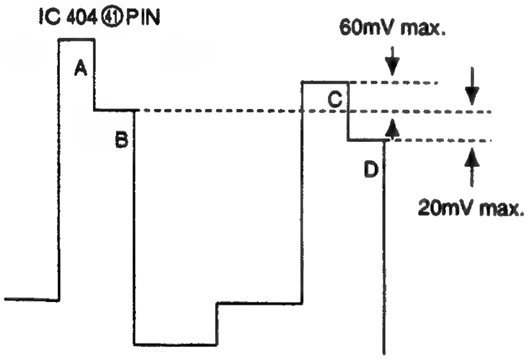
Make adjustment so that the 1st and 4th peaks are at the same level.

Fig. 5-18

10-6. NTSC 358 R-Y LEVEL

Note : Be sure to set ACC in the ON position before this adjustment.

1) Input an NTSC 358 color bar.
2) Connect the probe of an oscilloscope to IC 404 ㊶PIN or TP401.
3) Set the unit in the service mode.
4) Adjust R-Y LEVEL NTSC 358 so that the peaks of waveforms will be flush with each other as shown in Fig.5-19.



Make adjustment so that B=D as shown above.(20mV max.)
Check that the difference between B and C is less than 60mV.

Fig. 5-19

10-7. NTSC 443 PHASE (NORMAL)

Note : 10-7-3). is not applicalbe to the group of models 3.

1) Input an NTSC 433 color bar.
2) Connect the probe of an oscilloscope to TP306.
3) Set the unit in the H/V DELAY mode.
4) Set the unit in the service mode.
5) Adjust PHASE NTSC 443 NOR so that the burst section of the output waveform will be straight. (Fig.5-20)

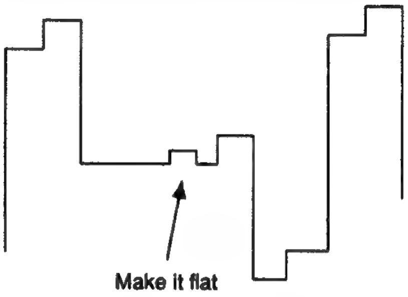


Fig. 5-20

10-8. NTSC 443 PHASE (ACC OFF)

Note : 10-8. is not applicable to group of models 3.

1) Conduct ACC OFF via MENU.
2) Adjust PHASE NTSC 443 ACC OFF in the same way as 10-7-5). (Fig.5-21)

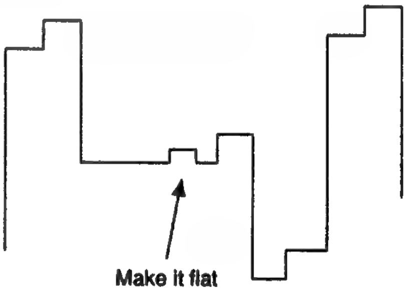


Fig. 5-21

10-9. NTSC 443 B-Y PHASE
NTSC 443 CHROMA NOR

Note : Be sure to set ACC in the ON position before this adjustment.

Note : Remove HV.DELAY before this adjustment.

1) Input an NTSC 443 color bar.
2) Connect the probe of an oscilloscope to TP402.
3) Set the unit in the service mode.
4) While tracking by means of B-Y PHASE NTSC 443 and CHROMA NTSC 443 NOR, make adjustment so that the peaks of waveforms will be the same. (Fig.5-22)

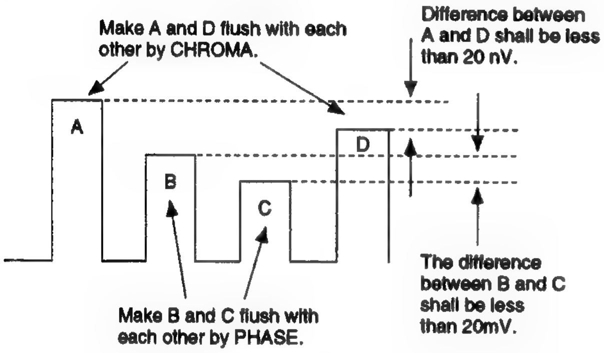

Make A and D flush with each other by CHROMA.
Difference between A and D shall be less than 20 nV.
A
B
C
D
Make B and C flush with each other by PHASE.
The difference between B and C shall be less than 20mV.

Fig. 5-22

10-10. NTSC 443 CHROMA (ACC OFF)

Note : 10-10. is not applicable to the group of models 3.

1) Conduct ACC OFF via MENU.
2) Adjust [CHROMA NTSC 443 ACC OFF] in the same way as 10-9-4). (Fig.5-23)

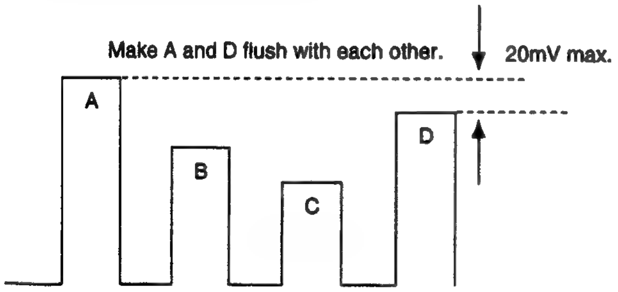


Fig. 5-23

10-11. NT 443 R-Y LEVEL

Note : Be sure to set ACC in the ON position before this adjustment.

1) Input an NTSC 443 color bar.
2) Connect the probe of an oscilloscope to TP401.
3) Set the unit in the service mode.
4) Adjust R-Y LEVEL NTSC 443 in the same way as 10-6-4). (Fig.5-24)

Make adjustment so that B = D. (20 mV max.) Check that the difference between B and C is 60 mV or less.

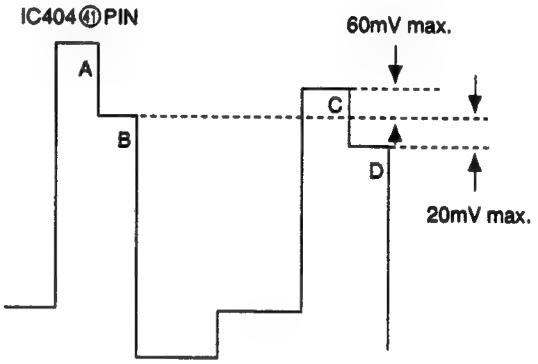
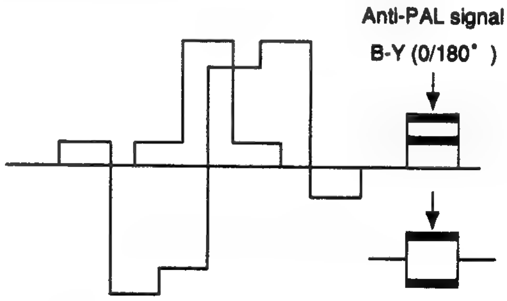


Fig. 5-24

10-12. PAL PHASE (NORMAL)

1) Input a PAL SP color bar.
2) Connect the probe of an oscilloscope to TP306.
3) Set the unit in the service mode.
4) Adjust PHASE PAL NOR so that the waveform of the B-Y anti-PAL signal will be "0."



*The signal waveform differs slightly every hour. Adjust it to "0."

Fig. 5-25 R-Y OUT

10-13. PAL PHASE (ACC OFF)

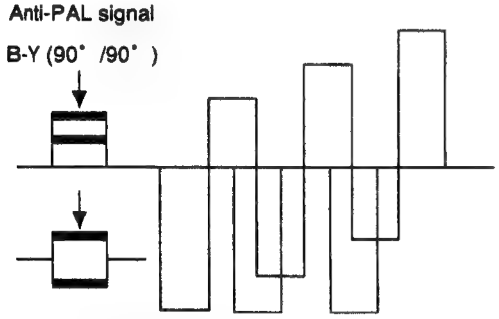
Note : 10-13. is not applicable to the group of models 3.

1) Conduct ACC OFF via MENU.
2) Adjust PHASE PAL ACC OFF in the same way as 10-12-4).

10-14. PAL B-Y PHASE

Note : Be sure to set ACC in the ON position before this adjustment.

1) Input a PAL SP color bar.
2) Connect the probe of an oscilloscope to TP305.
3) Set the unit in the service mode.
4) Adjust B-Y PHASE PAL so that the waveform of the R-Y anti-PAL signal will be "0." (Fig.5-26)



*The signal waveform differs slightly every hour. Adjust it to "0."

Fig. 5-26 B-Y OUT

10-15. PAL CHROMA (NORMAL)

1) Input a PAL color bar.
2) Connect the probe of an oscilloscope to IC404 ㉚ PIN or TP402.
3) Set the unit in the service mode.
4) Adjust CHROMA PAL NOR so that the peaks of waveforms will be flush with each other. (Fig.5-27)

10-16. PAL CHROMA (ACC OFF)

Note : 10-16. is not applicable to the group of model 3.

1) Conduct ACC OFF via MENU.
2) Adjust CHROMA PAL ACC OFF in the same way as10-15-4).(Fig.5-27)

Make B and D flush with each other.

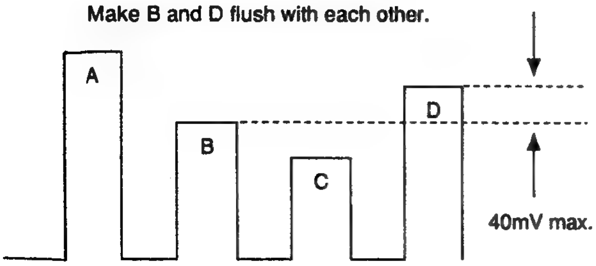


Fig. 5-27

10-17. PAL R-Y LEVEL

Note : Be sure to set ACC in the ON position before this adjustment.

1) Input a PAL color bar.
2) Connect the probe of an oscilloscope to IC404 ㊶ PIN or TP401.
3) Set the unit in the service mode.
4) Adjust R-Y LEVEL PAL so that the peaks of waveforms will be flush with each other as shown on the right. (Fig.5-28)

Make adjustment so that B=D.

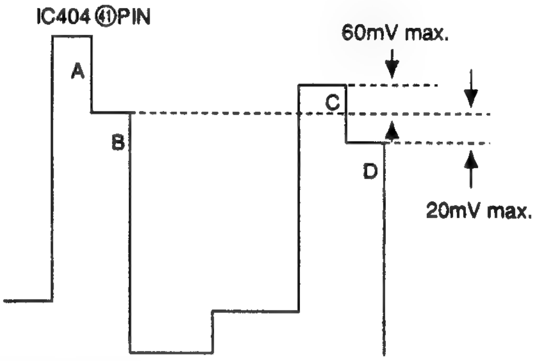


Fig. 5-28

11. SECAM adjustment

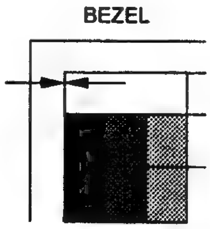
Note : Make adjustment after deflection adjustment.
Note : Subject to H-FREQ, H-BLK, VIDEO-PHASE, ANGLE, BOW, H-DELAY, etc.
Note: 11. SECAM adjustment is not applicable to the group of models 3.

11-1. HP WIDTH (NORMAL) adjustment

1) Input a SECAM color bar.

Note : The board is roughly adjusted in 11-1., and IC317 ⑩ PIN pulse width may be used for control.

2) Set the unit in the UNDER SCAN mode.
3) Set the unit in the service mode.
4) Adjust HP WIDTH NOR so that the color section at the left edge of the upper portion of the screen is about to disappear. (Fig.5-29)



Make adjustment so that colors are about to disappear.

Fig. 5-29

11-2. Writing HP.WIDTH (NORMAL) data

Note : Not applicable to groups of models 1, 2, 4, and 5.

1) Set the unit in the service mode.
2) Input 102 to HP.WIDTH (NOR).

11-3. HP POSITION adjustment

Note : 11-3. is not applicable to the group of models 3.

1) Input a SECAM color bar.
2) Set the HV-DL mode.
3) Set the unit in the service mode.
4) Adjust **HP POSITION** as shown in Fig.5-30.

Note : The same as 11-3. The phase relationship between the beginning of IC317 ⑩ PIN pulse and the input VIDEO signal may be used for control.

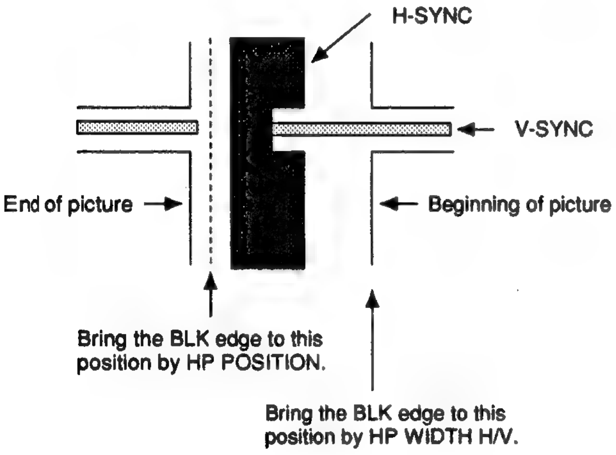

H-SYNC
V-SYNC
End of picture
Beginning of picture
Bring the BLK edge to this position by HP POSITION.
Bring the BLK edge to this position by HP WIDTH H/V.

Fig. 5-30

11-4. HP WIDTH (H/V-DL) adjustment

Note : 11-4. is not applicable to the group of models 3.

1) Input a SECAM color bar.
2) Set the unit in the HV-DELAY mode.
3) Set the unit in the service mode.
4) Adjust **HP WIDTH H/V-DELAY** as shown in Fig.5-30. (Note: Check HP POSITION. If it is not in position, repeat 2) and 3).)

11-5. SECAM COL BALANCE

Note : 11-5. is not applicable to the group of models 3.

1) Input a SECAM color bar.
2) Connect the probe of an oscilloscope to TP306.
3) Set the unit in the service mode.
4) Adjust **SECAM COLOR BALANCE R-Y** so that the level in the achromatic color will be straight.
5) Connect the probe of an oscilloscope to TP305.
6) Adjust **SECAM COLOR BALANCE B-Y** so that the level in the achromatic color will be straight.

11-6. SECAM CHROMA

1) Input a SECAM color bar.
2) Connect the probe of an oscilloscope to IC404 ㉚ PIN or TP402.
3) Set the unit in the service mode.
4) Adjust **CHROMA SECAM** so that the peaks of waveforms will be flush with each other as shown in Fig.5-31.

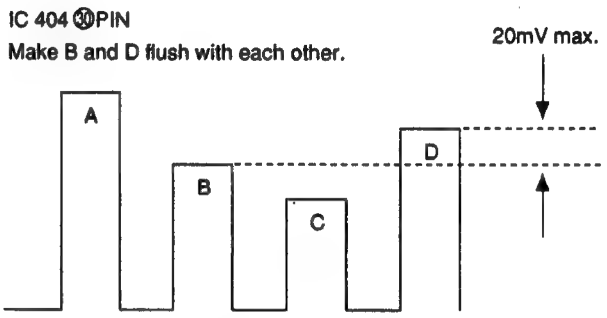


Fig. 5-31

11-7. SECAM R-Y LEVEL

1) Input a SECAM color bar.
2) Connect the probe of an oscilloscope to IC404 ㊶ PIN or TP401.
3) Set the unit in the service mode.
4) Adjust **R-Y LEVEL SECAM** so that the peaks of waveforms will be flush with each other as shown in Fig.5-32.

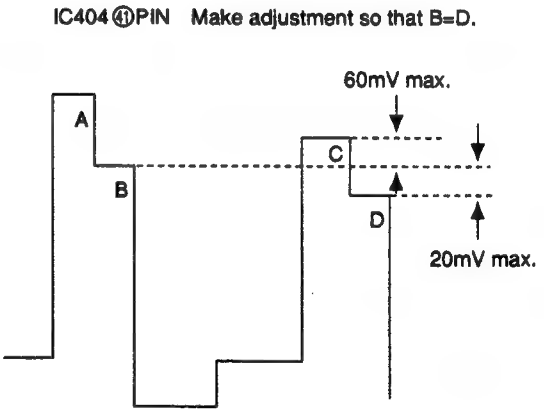


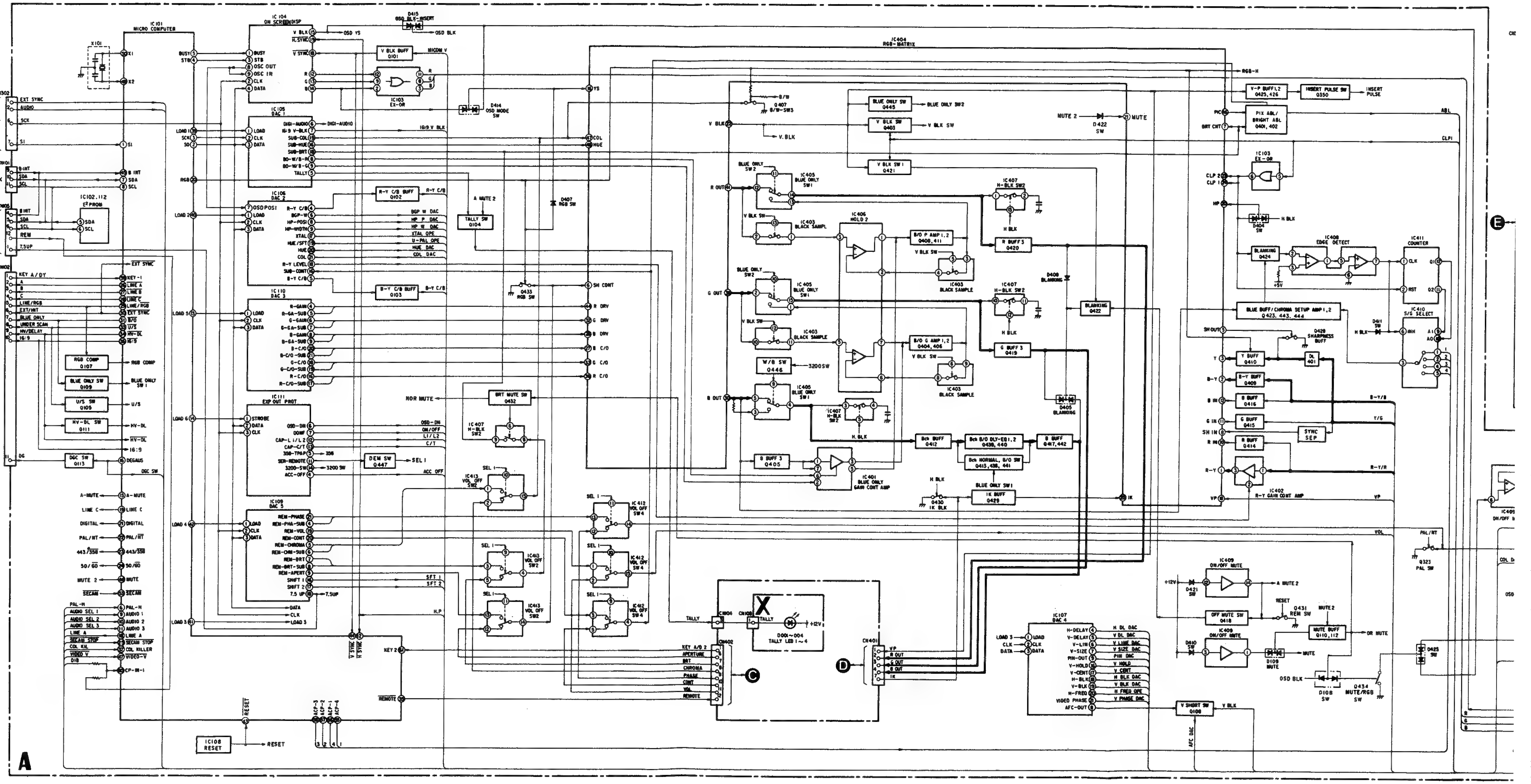
Fig. 5-32

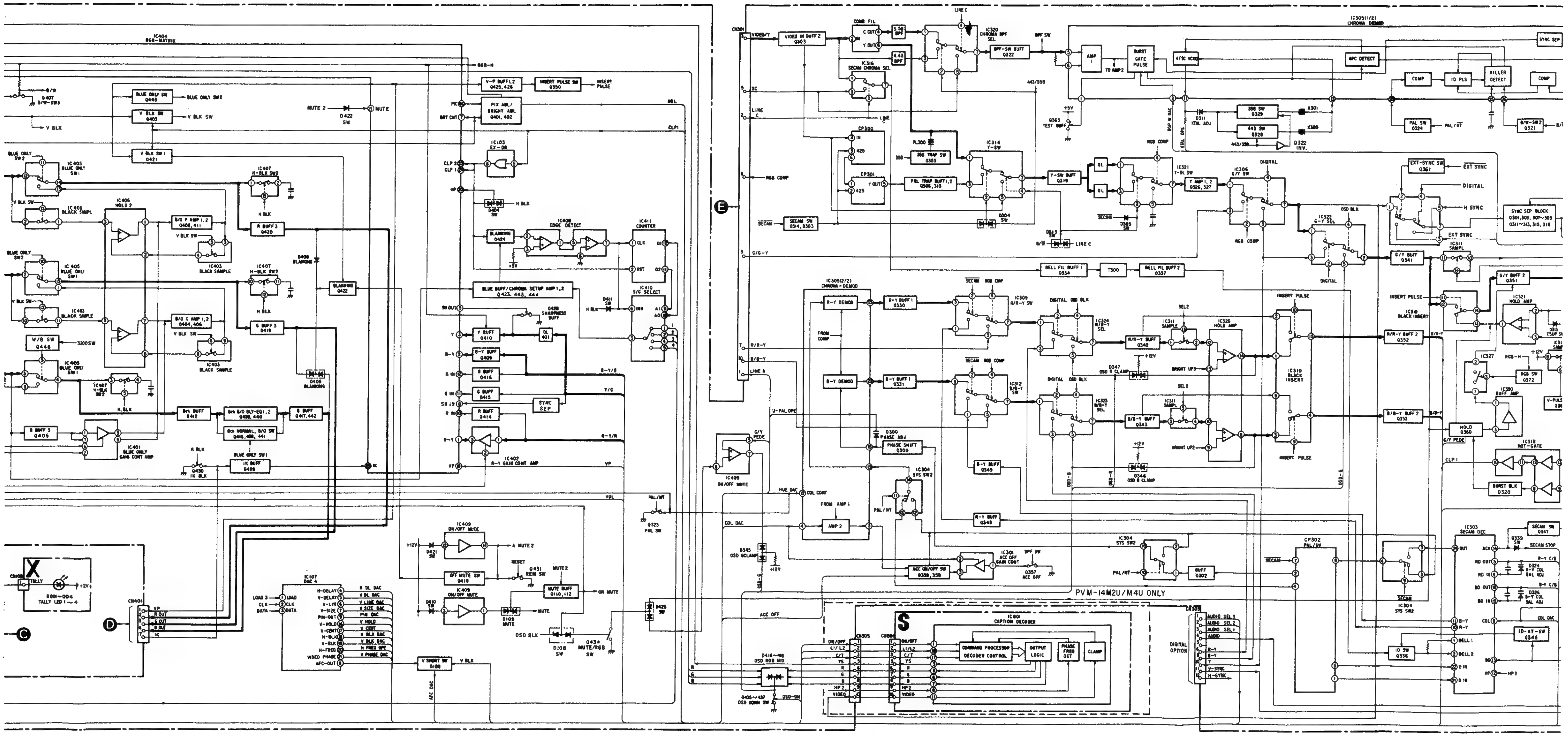
12. Writing adjustment results

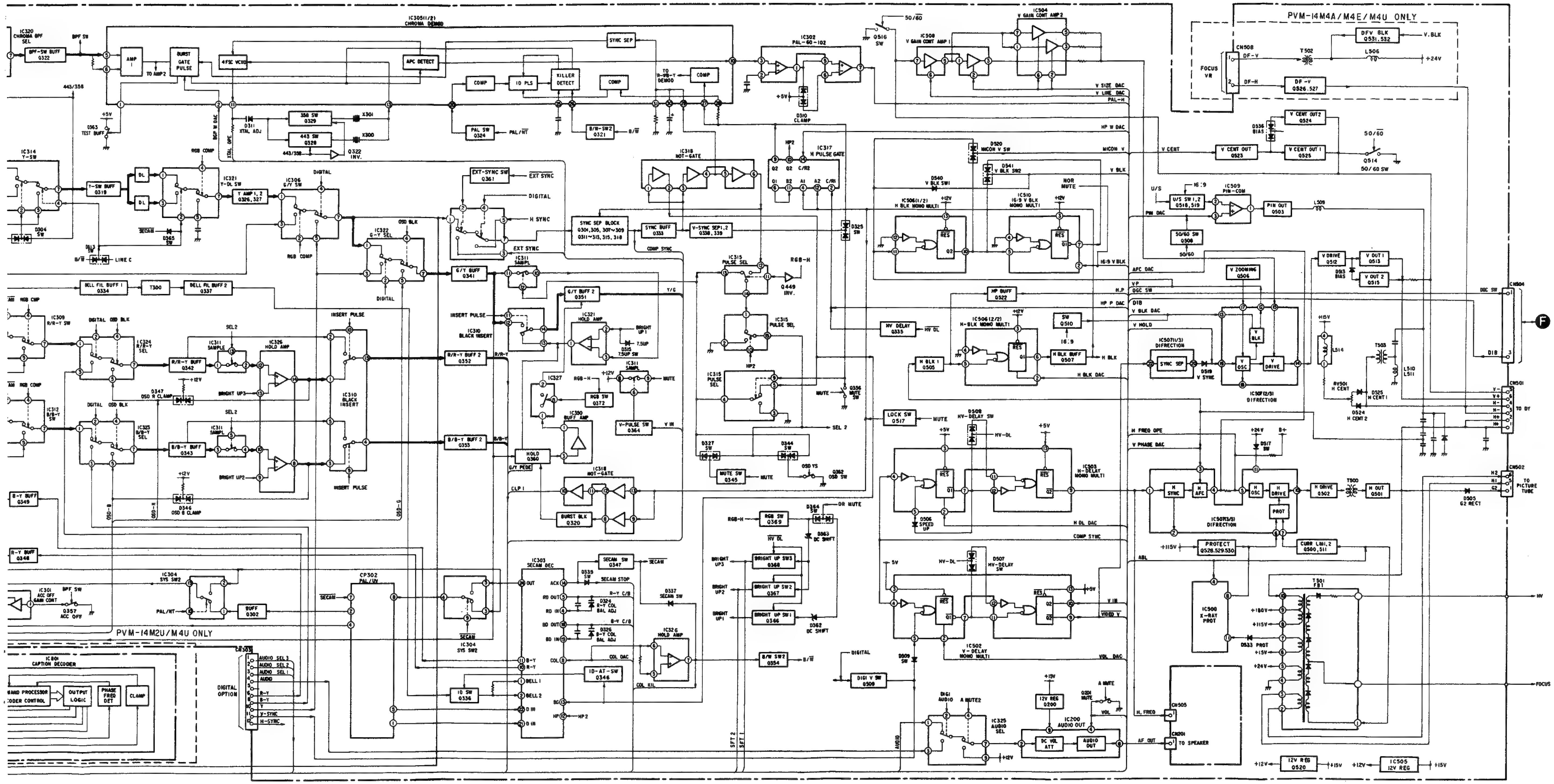
Write adjustment results in the memory.

SECTION 6
DIAGRAMS

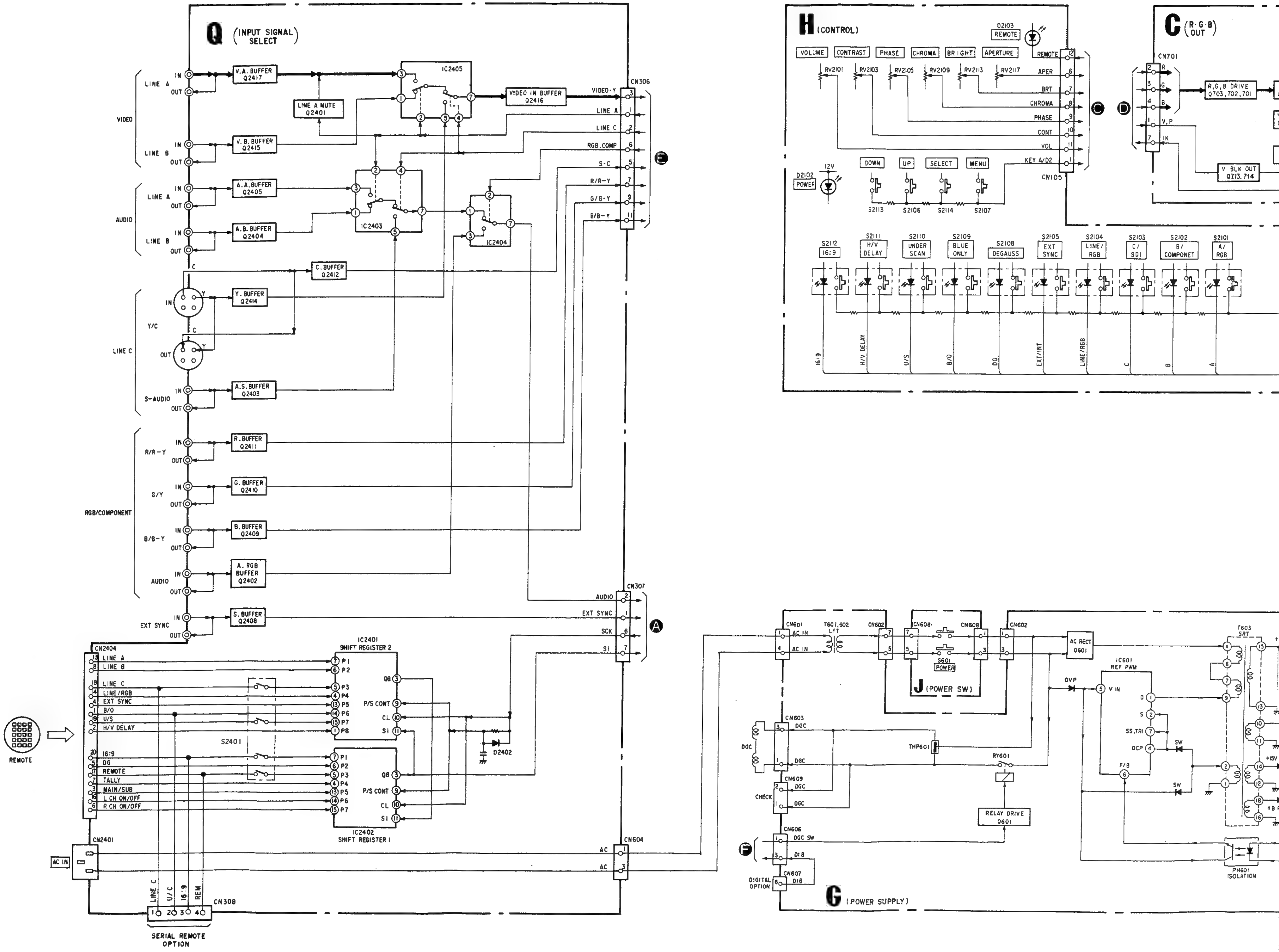
6-1. BLOCK DIAGRAMS (1)

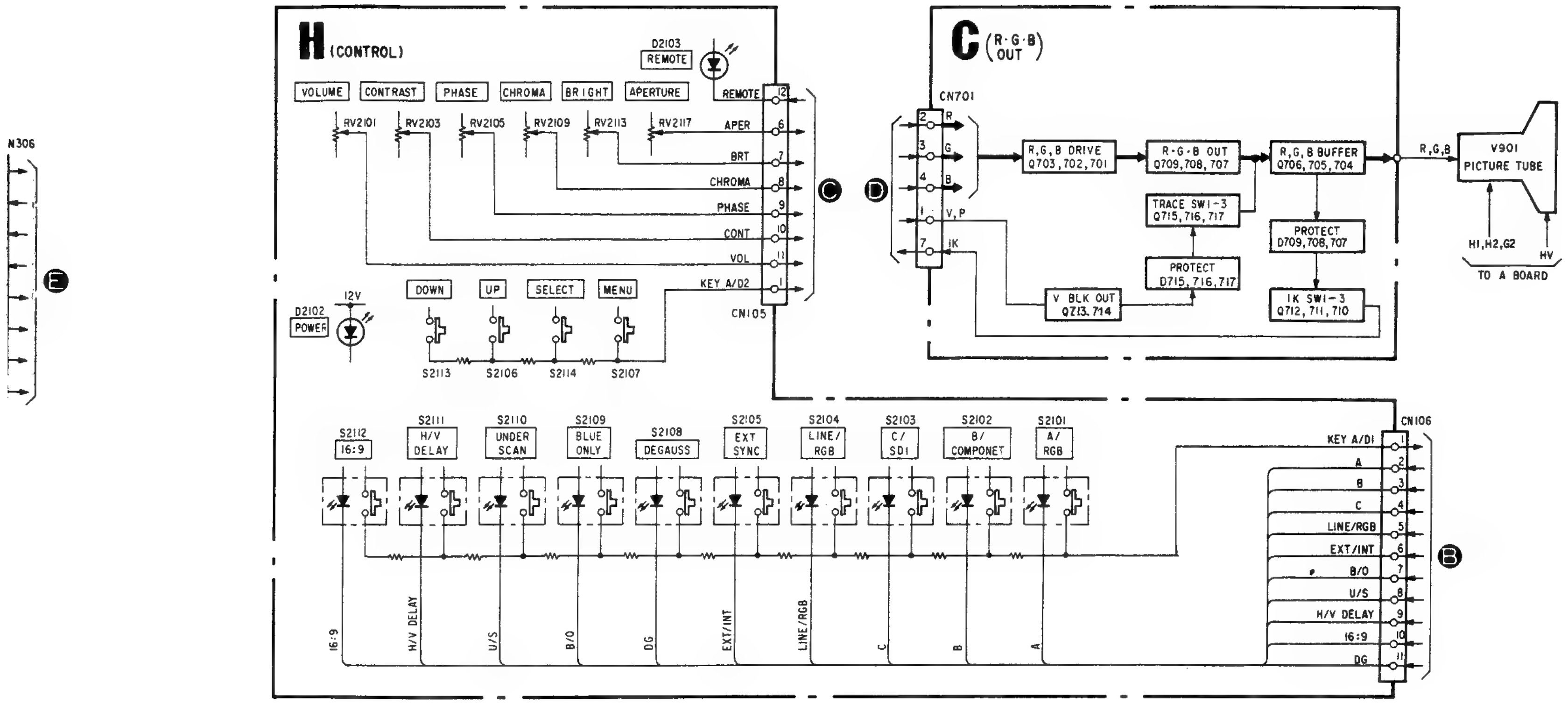


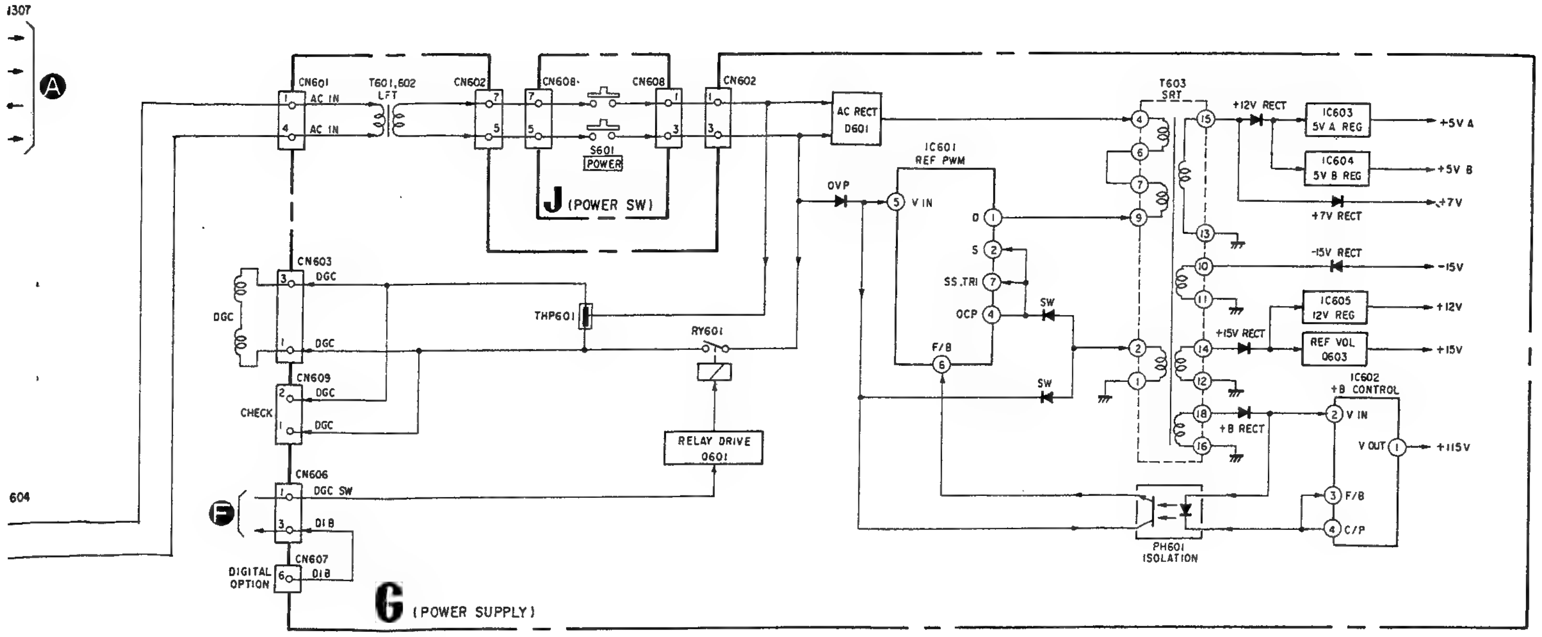

IC404 RGB-MATRIX
BLUE ONLY SW 0445
V BLK SW 0403
V BLK SW 1 0421
IC405 BLUE ONLY SW1
IC406 HOLD 2
IC407 H-BLK SW2
IC403 BLACK SAMPLE
B/G P AMP 1,2 0408,411
R BUFF 3 0420
B/G G AMP 1,2 0404,406
G BUFF 3 0419
W/B SW 0446
B BUFF 3 0405
IC401 BLUE ONLY GAIN CONT AMP
IK BUFF 0429
MUTE 2
D422 SW
V-P BUFF 1,2 0425,426
INSERT PULSE SW 0350
PIX ABL/BRIGHT ABL 0401,402
IC103 EX-OR
IC408 EDGE DETECT
IC411 COUNTER
IC410 S/G SELECT
BLANKING 0424
BLUE BUFF/CHROMA SETUP AMP 1,2 0423,443,444
Y BUFF 0410
B-Y BUFF 0409
B BUFF 0416
G BUFF 0415
R BUFF 0414
SYNC SEP
IC402 R-Y GAIN CONT AMP
IC409 ON/OFF MUTE
OFF MUTE SW 0418
MUTE BUFF 0110,112
IC107 DAC 4
V SHORT SW 0108
CN401
CN108 TALLY
D001~004 TALLY LED 1~4
CN301
VIDEO IN BUFF 2 0303
COMB FIL
IC320 CHROMA BPF SEL
BPF-SW BUFF 0322
IC316 SECAM CHROMA SEL
CP300
CP301
358 TRAP SW 0355
PAL TRAP BUFF 1,2 0306,310
IC314 Y-SW
Y-SW BUFF 0319
SECAM SW 0314,D303
IC321 Y-DL SW
Y AMP 1,2 0326,327
IC306 G/Y SW
IC322 G-Y SEL
IC305(1/2) CHROMA DEMOD
BURST GATE PULSE
4fsc VCXO
APC DETECT
KILLER DETECT
COMP
ID PLS
PAL SW 0324
B/W-SW2 0321
358 SW 0325
443 SW 0328
0322 INV.
EXT-SYNC SW 0361
SYNC SEP BLOCK
BELL FIL BUFF 1 0334
T300
BELL FIL BUFF 2 0337
IC305(2/2) CHROMA-DEMOD
R-Y DEMOD
B-Y DEMOD
R-Y BUFF 1 0330
B-Y BUFF 1 0331
IC309 R/R-Y SW
IC312 B/B-Y SW
R/R-Y BUFF 0342
B/B-Y BUFF 0343
IC326 HOLD AMP
IC310 BLACK INSERT
R/R-Y BUFF 2 0352
B/B-Y BUFF 2 0353
HOLD 0360
IC318 NOT-GATE
BURST BLK 0320
IC409 ON/OFF MUTE
0300 PHASE ADJ
PHASE SHIFT 0300
IC304 SYS SW2
AMP 2
ACC ON/OFF SW 0356,358
IC301 ACC OFF GAIN CONT
BUFF 0302
CP302 PAL/NT
IC303 SECAM DEC
ID SW 0336
ID-AT-SW 0346
PVM-14M2U/M4U ONLY
IC801 CAPTION DECODER
COMMAND PROCESSOR DECODER CONTROL
OUTPUT LOGIC
PHASE FREQ DET
CLAMP
CN305
CN806
CN303
DIGITAL OPTION
D416~418 OSD RGB MIX
D435~437 OSD DOWN SW
X
C
D
E
S


PVM-14M4A/M4E/M4U ONLY
PVM-14M2U/M4U ONLY
IC320 CHROMA BPF SEL
BPF-SW BUFF Q322
AMP
BURST GATE PULSE
4FSC VCXO
IC305(1/2) CHROMA DEMOD
APC DETECT
SYNC SEP
COMP
ID PLS
KILLER DETECT
PAL SW Q324
B/W-SW2 Q321
358 SW Q329
443 SW Q328
Q322 INV.
D311 XTAL ADJ
IC314 Y-SW
Y-SW BUFF Q319
DL
IC321 Y-DL SW
Y AMP1,2 Q326,327
IC306 G/Y SW
IC322 G-Y SEL
EXT-SYNC SW Q361
EXT SYNC
DIGITAL
H SYNC
SYNC SEP BLOCK
SYNC BUFF Q333
V-SYNC SEP1,2 Q338,339
COMP SYNC
G/Y BUFF Q341
IC311 SAMPL
G/Y BUFF 2 Q351
BELL FIL BUFF 1 Q334
T300
BELL FIL BUFF 2 Q337
IC309 R/R-Y SW
IC324 R/R-Y SEL
R/R-Y BUFF Q342
IC326 HOLD AMP
IC310 BLACK INSERT
INSERT PULSE
R/R-Y BUFF 2 Q352
B/B-Y BUFF 2 Q353
IC312 B/B-Y SW
IC325 B/B-Y SEL
B/B-Y BUFF Q343
D347 OSD R CLAMP
D346 OSD B CLAMP
BRIGHT UP1
BRIGHT UP2
B-Y BUFF Q349
R-Y BUFF Q348
IC327
RGB SW Q372
IC330 BUFF AMP
HOLD Q360
G/Y PEDE
V-PULSE SW Q364
IC318 NOT-GATE
BURST BLK Q320
CLP 1
IC301 ACC OFF GAIN CONT
Q357 ACC OFF
IC304 SYS SW2
PAL/NT
BUFF Q302
CP302 PAL/NT
SECAM
IC303 SECAM DEC
SECAM SW Q347
Q339 SW SECAM STOP
Q337 SECAM SW
IC326 HOLD AMP
ID-AT-SW Q346
ID SW Q336
IC801 CAPTION DECODER
OUTPUT LOGIC
PHASE FREQ DET
CLAMP
CN303
AUDIO SEL 3
AUDIO SEL 2
AUDIO SEL 1
AUDIO
R-Y
B-Y
Y
V-SYNC
H-SYNC
DIGITAL OPTION
IC302 PAL-60-102
D310 CLAMP
IC317 H PULSE GATE
IC318 NOT-GATE
IC315 PULSE SEL
Q449 INV.
RGB-H
Q356 MUTE SW
Q327 SW
Q344 SW
MUTE SW Q345
OSD YS
Q362 OSD SW
RGB SW Q369
D364 SW
D363 DC SHIFT
BRIGHT UP SW3 Q368
BRIGHT UP SW2 Q367
BRIGHT UP SW1 Q366
D362 DC SHIFT
B/W SW2 Q354
HV DELAY Q335
LOCK SW Q517
D325 SW
50/60
Q516 SW
IC508 V GAIN CONT AMP 1
IC504 V GAIN CONT AMP 2
V SIZE DAC
V LINE DAC
PAL-H
HP W DAC
MICON V
D520 MICON V SW
D541 V BLK SW2
D540 V BLK SW1
IC506(1/2) H BLK MONO MULTI
IC510 16:9 V BLK MONO MULTI
NOR MUTE
16:9 V BLK
AFC DAC
HP BUFF Q522
H.P
HP P DAC
IC506(2/2) H-BLK MONO MULTI
SW Q510
H BLK 1 Q505
H BLK BUFF Q507
H BLK DAC
D508 HV-DELAY SW
IC503 H-DELAY MONO MULTI
D506 SPEED UP
H DL DAC
COMP SYNC
D507 HV-DELAY SW
IC502 V-DELAY MONO MULTI
V IN
VIDEO V
VOL DAC
DIGI V SW Q509
DIGI AUDIO
A MUTE2
IC325 AUDIO SEL
12V REG Q200
IC200 AUDIO OUT
DC VOL ATT
AUDIO OUT
Q201 MUTE
A MUTE
CN505
H. FREQ
AF OUT
CN201 TO SPEAKER
CN508
FOCUS VR
DF-V
DF-H
DFV BLK Q531,532
T502
L506
DF-V Q526,527
V CENT OUT 2 Q524
V CENT OUT Q523
V CENT OUT 1 Q525
Q514 50/60 SW
IC509 PIN-COM
U/S SW 1,2 Q518,519
PIN OUT Q503
PIN DAC
50/60 SW Q508
V DRIVE Q512
V OUT 1 Q513
V OUT 2 Q515
V ZOOMING Q506
V HOLD
IC507(1/3) DIFRECTION
SYNC SEP
Q519 V SYNC
V OSC
V DRIVE
IC507(2/3) DIFRECTION
H FREQ OPE
V PHASE DAC
H SYNC
H AFC
H OSC
H DRIVE
PROT
IC507(3/3) DIFRECTION
H DRIVE Q502
T500
H OUT Q501
D505 G2 RECT
PROTECT Q528,529,530
CURR LMI.1,2 Q500,511
ABL
IC500 X-RAY PROT
Q533 PROT
T501 FBT
L514
T503
RV501 H CENT
Q525 H CENT 1
Q524 H CENT 2
CN504
DGC SW
CN501 TO DY
CN502 TO PICTURE TUBE
HV
FOCUS
12V REG Q520
IC505 12V REG
F

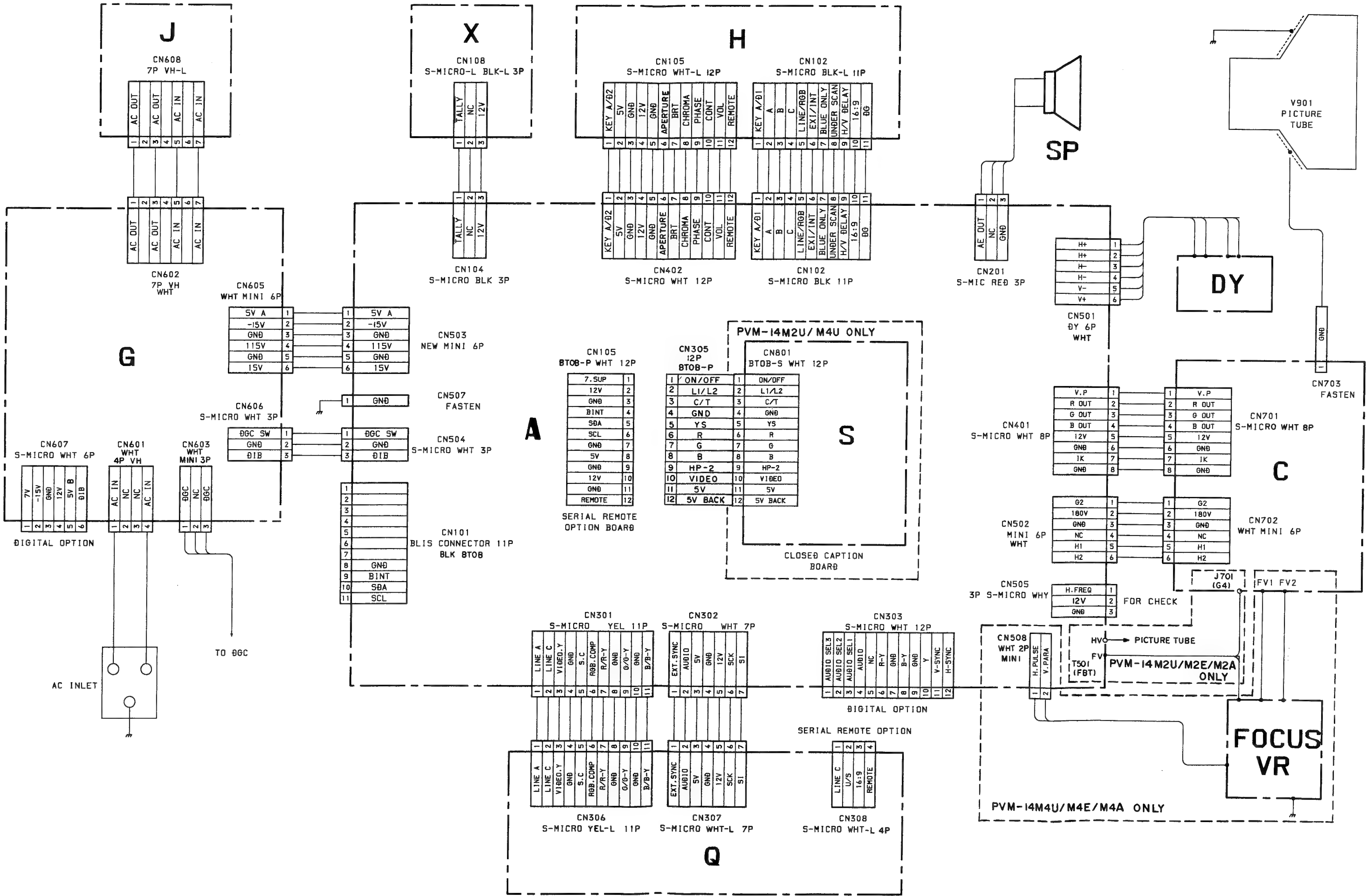
BLOCK DIAGRAMS (2)

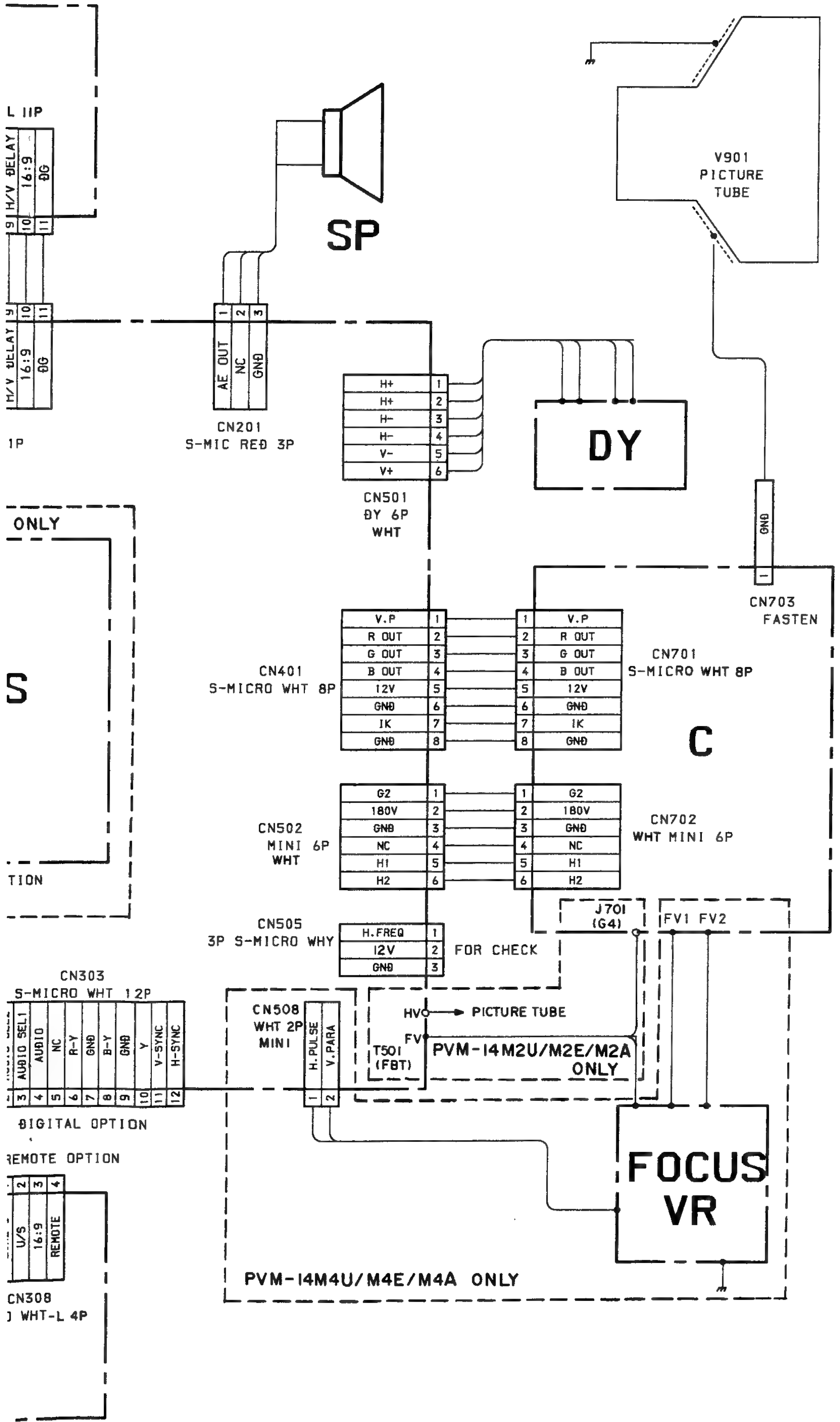



N306
E
H (CONTROL)
D2103 REMOTE
VOLUME
CONTRAST
PHASE
CHROMA
BRIGHT
APERTURE
RV2101
RV2103
RV2105
RV2109
RV2113
RV2117
REMOTE
APER
BRT
CHROMA
PHASE
CONT
VOL
KEY A/D2
CN105
DOWN
UP
SELECT
MENU
D2102 POWER
12V
S2113
S2106
S2114
S2107
C
D
C (R·G·B OUT)
CN701
R
G
B
V, P
IK
R, G, B DRIVE Q703, 702, 701
R·G·B OUT Q709, 708, 707
R, G, B BUFFER Q706, 705, 704
TRACE SW1-3 Q715, 716, 717
PROTECT Q715, 716, 717
PROTECT D709, 708, 707
V BLK OUT Q713, 714
IK SW1-3 Q712, 711, 710
R, G, B
V901 PICTURE TUBE
H1, H2, G2
HV
TO A BOARD
S2112 16:9
S2111 H/V DELAY
S2110 UNDER SCAN
S2109 BLUE ONLY
S2108 DEGAUSS
S2105 EXT SYNC
S2104 LINE/RGB
S2103 C/SDI
S2102 B/COMPONET
S2101 A/RGB
16:9
H/V DELAY
U/S
B/O
DG
EXT/INT
LINE/RGB
C
B
A
CN106
KEY A/D1
A
B
C
LINE/RGB
EXT/INT
B/O
U/S
H/V DELAY
16:9
DG
B


1307
A
604
F
CN601
AC IN
T601, 602 LFT
CN602
CN608
S601 POWER
J (POWER SW)
CN602
AC RECT D601
IC601 REF PWM
OVP
V IN
D
S
SS.TRI
OCP
F/B
SW
T603 SRT
+12V RECT
IC603 5V A REG
IC604 5V B REG
+7V RECT
-15V RECT
IC605 12V REG
+15V RECT
REF VOL Q603
IC602 +B CONTROL
+B RECT
V IN
V OUT
F/B
C/P
+5V A
+5V B
+7V
-15V
+12V
+15V
+115V
CN603
DGC
DGC
CN609
CHECK
THP601
RY601
RELAY DRIVE Q601
CN606
DGC SW
D18
CN607
DIGITAL OPTION
PH601 ISOLATION
G (POWER SUPPLY)

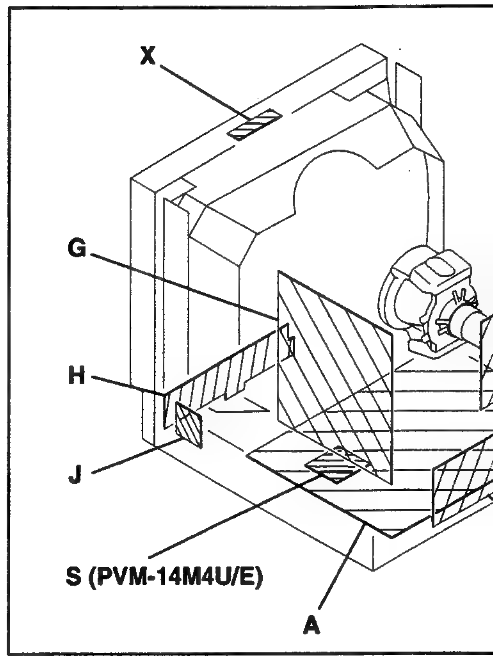
6-2. FRAME SCHEMATIC DIAGRAM





MEMO

6-3. CIRCUIT BOARDS LOCATION



6-4. PRINTED WIRING BOARDS AND S

Note:

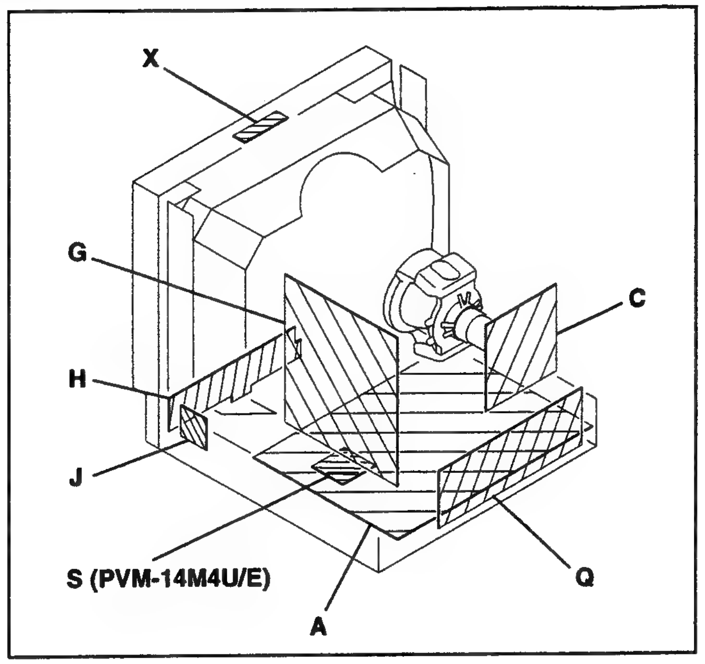
- All capacitors are in μF unless otherwise noted.
50 WV or less are not indicated except for electrolytics.
- Indication of resistance, which does not have one f
electrical power, is as follows.

Pitch: 5 mm
Rating electrical power ¼ W

- All resistors are in ohms.
- : nonflammable resistor.
- : fusible resistor.
- △ : internal component.
- ▭ : panel designation, and adjustment for repair.
- All variable and adjustable resistors have characteristi
B, unless otherwise noted.
- The components identified by ☒ in this basic sc
diagram have been carefully factory-selected for each
order to satisfy regulations regarding X-ray radiation.
Should replacement be required, replace only with th
originally used.
- When replacing components identified by ◪ , ma
necessary adjustments indicated. If results do not m
specified value, change the component identified by
repeat the adjustment until the specified value is ac
(Refer to R1536 adjust on Page 25 and 26.)
- When replacing the part in below table, be sure to perf
related adjustment.

Part replaced (◪)	A
C512, C513, C523, C549, C592, D501, D533, IC500, IC507, Q500, Q511, R506, R508, R515, R516, R517, R518, R519, R551, R1537, R1560··········· (A BOARD)	(H

6-3. CIRCUIT BOARDS LOCATION



6-4. PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

Note:

- All capacitors are in μF unless otherwise noted. pF: μμF 50 WV or less are not indicated except for electrolytics.
- Indication of resistance, which does not have one for rating electrical power, is as follows.

Pitch: 5 mm Rating electrical power ¼ W

- All resistors are in ohms.
- ⊟ : nonflammable resistor.
- ∿ : fusible resistor.
- △ : internal component.
- ▭ : panel designation, and adjustment for repair.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- The components identified by ⊠ in this basic schematic diagram have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation.
  Should replacement be required, replace only with the value originally used.
- When replacing components identified by ◪, make the necessary adjustments indicated. If results do not meet the specified value, change the component identified by ⊠ and repeat the adjustment until the specified value is achieved. (Refer to R1536 adjust on Page 25 and 26.)
- When replacing the part in below table, be sure to perform the related adjustment.

Part replaced (◪)	Adjustment (⊠)
C512, C513, C523, C549, C592, D501, D533, IC500, IC507, Q500, Q511, R506, R508, R515, R516, R517, R518, R519, R551, R1537, R1560·········· (A BOARD)	R1536 (HOLD-DOWN)

- All voltages are in V.
- Voltage are dc with respect to ground unless otherwise noted.
- Readings are taken with a color-bar signal input.
- Voltage variations may be noted due to normal production tolerances.
- ━━━ : B + bus.
- ▬ ▬ ▬ : B − bus.
- ░░▷ : signal path.
- **No mark** : with PAL colour-bar signal sreceived or common voltage.
- For the respective voltage ratings in SECAM, NTSC 3.58, NTSC 4.43 S-VIDEO, and ANALOG RGB modes, see the table

Reference information

RESISTOR	: RN	METAL FILM
	: RC	SOLID
	: FPRD	NONFLAMMABLE CARBON
	: FUSE	NONFLAMMABLE FUSIBLE
	: RW	NONFLAMMABLE WIREWOUND
	: RS	NONFLAMMABLE METAL OXIDE
	: RB	NONFLAMMABLE CEMENT
COIL	: LF-8L	MICRO INDUCTOR
CAPACITOR	: TA	TANTALUM
	: PS	STYROL
	: PP	POLYPROPYLENE
	: PT	MYLAR
	: MPS	METALIZED POLYESTER
	: MPP	METALIZED POLYPROPYLENE
	: ALB	BIPOLAR
	: ALT	HIGH TEMPERATURE
	: ALR	HIGH RIPPLE

Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Note: Les composants identifiés par une trame et par une marque ⚠ sont d'une importance critique pour la sécurité. Ne les remplacer que par des pièces de numéro spécifié.

A

[MICON, RGB-MATRIX, DAC,
ON SCREEN DISPLAY, ON/OFF MUTE,
VOL OFF SW, BLACK-SAMPLING, RGB SW]

[CHROMA DEMOD, SECAM CHROMA SELECT, SYSTEM SW,
SYNC SELECT, B/B-Y SW, R/R-Y SW, G/Y SW,
AUDIO SELECT, SECAM DECODER, HOLD AMP]

[H/V OUT, DEFLECTION SYSTEM,
AUDIO OUT]

A BOARD
(COMPONENT SIDE)

IC	
IC101	B–2
IC102	B–2
IC103	C–1
IC104	B–2
IC105	B–3
IC106	C–3
IC107	C–2
IC109	C–3
IC110	C–3
IC111	B–2
IC112	B–2
IC200	A–5
IC301	G–2
IC302	G–3
IC303	E–1
IC304	G–1
IC305	G–2
IC306	F–3
IC309	F–3
IC310	D–3
IC311	E–3
IC312	E–3
IC313	F–2
IC314	G–4
IC315	D–2
IC316	G–5
IC317	D–1
IC318	D–2
IC320	F–5
IC321	F–5
IC322	E–5
IC323	E–5
IC324	E–4
IC325	E–4
IC326	E–2
IC327	C–3
IC350	D–2
IC401	B–4
IC402	D–4
IC403	B–5
IC404	D–4
IC405	C–5
IC406	B–5
IC407	C–5
IC408	C–6
IC409	C–6
IC410	B–5
IC411	B–5
IC412	B–4
IC413	C–4
IC500	G–8
IC502	G–6
IC503	G–6
IC504	C–7
IC505	E–6
IC506	E–6
IC507	D–7
IC508	C–7
IC509	C–8
IC510	E–3
IC511	A–7
IC512	A–8

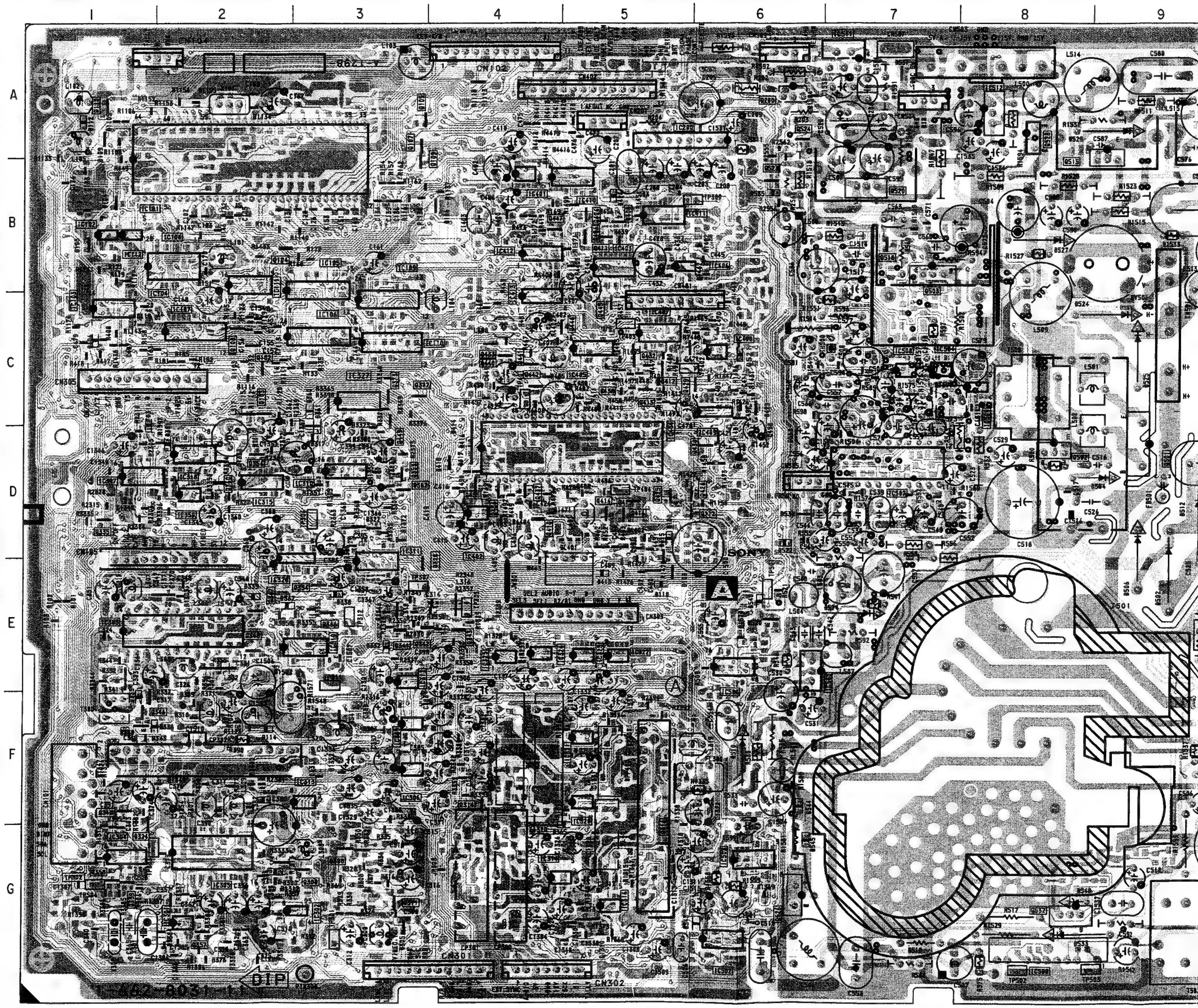
TRANSISTOR	
Q102	C–2
Q103	C–2
Q104	B–2
Q105	A–3
Q107	A–3
Q108	C–2
Q109	A–3
Q110	A–1
Q112	D–6
Q200	A–6
Q300	G–3
Q308	G–3
Q311	G–3
Q314	F–4
Q316	F–5
Q320	E–3
Q324	G–1
Q335	D–1
Q340	F–1
Q341	E–3
Q342	E–3
Q343	E–4
Q346	F–1
Q347	E–2
Q348	E–2
Q353	D–3
Q354	E–3
Q355	F–5
Q356	D–2
Q357	G–2
Q358	G–1
Q359	G–1
Q360	D–2
Q362	D–3
Q365	E–3
Q366	E–3
Q372	C–3
Q373	C–3
Q374	C–3
Q404	B–5
Q406	B–5
Q408	B–5
Q410	D–4
Q411	B–5
Q412	C–5
Q413	C–5
Q414	D–5
Q415	D–5
Q416	D–5
Q425	D–5
Q426	D–6
Q429	C–5
Q430	D–6
Q432	C–5
Q433	C–4
Q435	D–4
Q436	D–4
Q437	D–4
Q438	C–5
Q440	C–4
Q441	C–4
Q442	C–4
Q445	C–5
Q446	C–5
Q447	B–4
Q449	D–3
Q501	D–9
Q502	D–8
Q503	B–7
Q512	A–10
Q513	A–9
Q515	A–8
Q518	B–7
Q520	B–7
Q523	B–6
Q524	A–6
Q525	A–6
Q526	G–6
Q527	E–10
Q528	A–8
Q532	G–8

DIODE	
D100	D–5
D104	B–1
D105	B–1
D106	B–4
D108	E–5
D109	A–1
D110	E–5
D112	A–1
D114	F–2
D300	G–2
D301	D–2
D305	G–3
D308	F–2
D313	G–5
D314	C–1
D327	D–3
D332	E–3
D335	F–1
D336	F–1
D338	E–3
D339	E–2
D360	C–3
D361	C–3
D362	E–2
D365	G–4
D381	D–2
D406	C–1
D413	E–5
D414	D–4
D415	D–5
D416	D–4
D417	D–4
D418	D–4
D423	C–6
D424	B–5
D502	E–9
D504	D–9
D505	E–10
D506	D–9
D510	F–6
D512	D–9
D514	E–7
D515	F–10
D520	E–6
D521	C–6
D522	D–6
D524	C–8
D525	C–9
D527	B–8
D528	A–10
D529	A–8
D530	A–10
D533	G–8
D535	B–6
D537	A–7
D538	D–6
D540	E–6
D541	F–3
D543	G–6
D544	F–6
D545	G–6
D546	E–10
D548	G–8

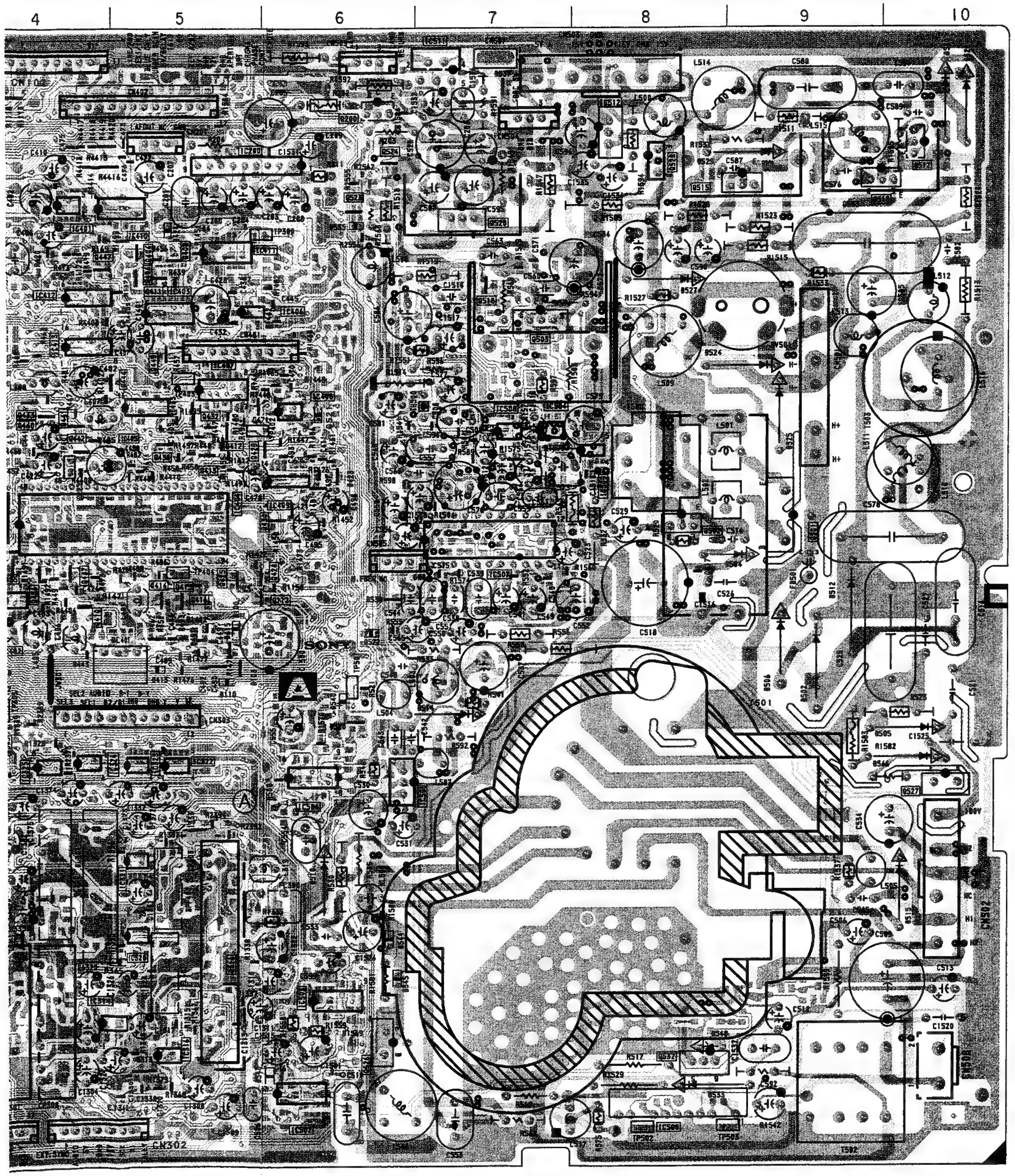
VARIABLE RESISTOR	
RV501	B–9

–A BOARD– <Component Side>

- ▨ : Pattern from the sid
- ▨ : Pattern of the rear s



• ░ : Pattern from the side which enables seeing.
• ▒ : Pattern of the rear side.



A BOARD
(CONDUCTOR SIDE)

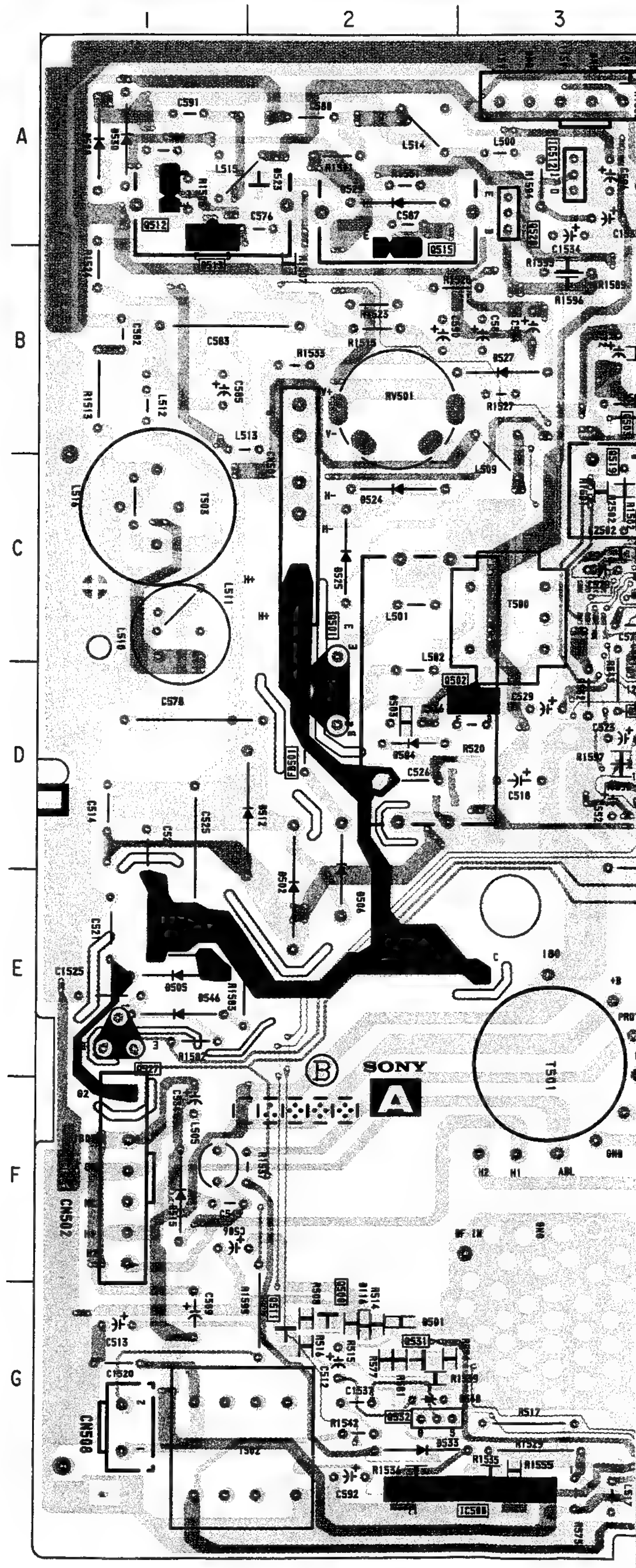
IC	
IC101	A–9
IC108	B–8
IC200	A–5
IC303	E–9
IC404	D–6
IC500	G–3
IC505	E–4
IC507	D–4
IC511	A–4
IC512	A–3

TRANSISTOR	
Q101	A–9
Q111	C–10
Q113	A–7
Q114	A–8
Q200	A–5
Q201	A–5
Q301	G–8
Q302	G–10
Q303	G–6
Q305	G–8
Q306	G–7
Q307	G–8
Q309	G–8
Q310	G–7
Q312	G–8
Q313	G–8
Q315	G–8
Q318	G–7
Q319	F–7
Q321	G–8
Q322	G–6
Q323	G–10
Q325	F–8
Q326	F–6
Q327	F–6
Q328	G–9
Q329	G–9
Q330	F–9
Q331	F–9
Q332	G–10
Q333	D–9
Q334	F–9
Q336	E–10
Q338	C–8
Q339	D–8
Q345	D–8
Q349	E–9
Q350	D–8
Q351	D–8
Q352	D–8
Q355	F–5
Q361	F–8
Q363	G–9
Q364	D–8
Q367	E–8
Q368	E–8
Q369	E–8
Q375	D–8
Q401	B–6
Q402	B–6
Q403	B–6
Q405	C–6
Q407	C–7
Q409	D–7
Q417	C–5
Q418	B–5
Q419	C–6
Q420	C–6
Q421	B–5
Q422	B–5
Q423	C–5
Q424	C–5
Q428	D–6
Q431	B–5
Q434	C–5
Q439	C–6
Q444	B–5
Q448	F–9
Q500	G–2
Q501	D–2
Q502	D–3
Q503	B–3
Q505	E–5
Q506	B–4
Q507	E–5
Q508	C–4
Q509	G–5
Q510	C–4
Q511	G–2
Q512	A–1
Q513	A–1
Q514	B–4
Q515	B–2
Q516	C–4
Q517	C–4
Q519	C–3
Q520	B–4
Q522	E–5
Q525	A–4
Q526	G–4
Q527	E–1
Q528	A–3
Q529	D–3
Q530	D–4
Q531	G–2
Q532	G–2
Q2501	C–4

DIODE	
D101	B–10
D102	B–9
D103	B–9
D107	B–9
D111	B–9
D115	B–9
D116	G–2
D200	A–4
D301	G–8
D303	F–7
D304	G–7
D307	G–8
D309	G–8
D310	G–8
D311	G–9
D315	E–8
D317	D–9
D320	D–9
D322	D–9
D323	C–9
D324	E–9
D325	D–8
D326	E–9
D333	C–9
D337	E–8
D344	D–8
D345	E–7
D346	E–7
D347	E–7
D363	E–8
D364	E–8
D401	B–7
D402	B–7
D404	D–6
D405	B–5
D407	D–7
D410	C–5
D411	B–6
D421	C–5
D422	C–5
D425	C–5
D427	B–6
D500	G–5
D501	G–2
D502	E–2
D503	D–2
D504	D–2
D505	E–1
D506	E–2
D507	G–5
D508	F–5
D509	G–5
D510	F–5
D511	E–5
D512	D–2
D513	E–5
D514	E–4
D515	F–1
D516	F–5
D517	E–4
D518	E–5
D519	C–4
D523	A–2
D524	C–2
D525	C–2
D526	B–4
D527	B–3
D528	A–1
D529	A–2
D530	A–1
D531	B–4
D532	B–4
D533	G–2
D534	B–4
D536	A–5
D542	B–4
D546	E–1
D547	D–4
D548	G–2

VARIABLE RESISTOR	
RV501	B–2

–A BOARD– <Conductor Side>



A BOARD
(CONDUCTOR SIDE)

IC	
IC101	A–9
IC108	B–8
IC200	A–5
IC303	E–9
IC404	D–6
IC500	G–3
IC505	E–4
IC507	D–4
IC511	A–4
IC512	A–3

TRANSISTOR	
Q101	A–9
Q111	C–10
Q113	A–7
Q114	A–8
Q200	A–5
Q201	A–5
Q301	G–8
Q302	G–10
Q303	G–6
Q305	G–8
Q306	G–7
Q307	G–8
Q309	G–8
Q310	G–7
Q312	G–8
Q313	G–8
Q315	G–8
Q318	G–7
Q319	F–7
Q321	G–8
Q322	G–6
Q323	G–10
Q325	F–8
Q326	F–6
Q327	F–6
Q328	G–9
Q329	G–9
Q330	F–9
Q331	F–9
Q332	G–10
Q333	D–9
Q334	F–9
Q336	E–10
Q338	C–8
Q339	D–8
Q345	D–8
Q349	E–9
Q350	D–8
Q351	D–8
Q352	D–8
Q355	F–5
Q361	F–8
Q363	G–9
Q364	D–8
Q367	E–8
Q368	E–8
Q369	E–8
Q375	D–8
Q401	B–6
Q402	B–6
Q403	B–6
Q405	C–6
Q407	C–7
Q409	D–7
Q417	C–5
Q418	B–5
Q419	C–6
Q420	C–6
Q421	B–5
Q422	B–5
Q423	C–5
Q424	C–5
Q428	D–6
Q431	B–5
Q434	C–5
Q439	C–6
Q444	B–5
Q448	F–9
Q500	G–2
Q501	D–2
Q502	D–3
Q503	B–3
Q505	E–5
Q506	B–4
Q507	E–5
Q508	C–4
Q509	G–5
Q510	C–4
Q511	G–2
Q512	A–1
Q513	A–1
Q514	B–4
Q515	B–2
Q516	C–4
Q517	C–4
Q519	C–3
Q520	B–4
Q522	E–5
Q525	A–4
Q526	G–4
Q527	E–1
Q528	A–3
Q529	D–3
Q530	D–4
Q531	G–2
Q532	G–2
Q2501	C–4

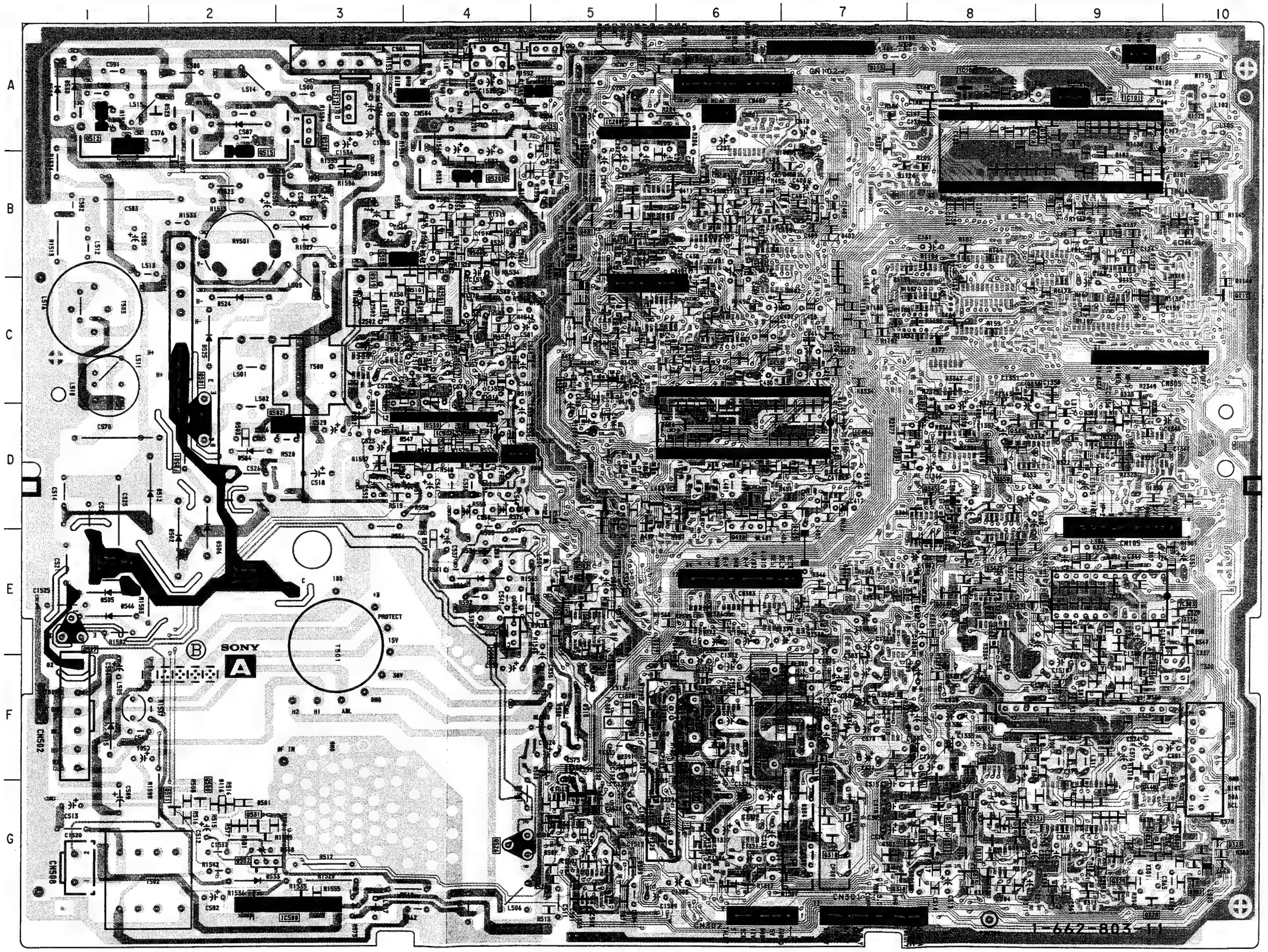
DIODE	
D101	B–10
D102	B–9
D103	B–9
D107	B–9
D111	B–9
D115	B–9
D116	G–2
D200	A–4
D301	G–8
D303	F–7
D304	G–7
D307	G–8
D309	G–8
D310	G–8
D311	G–9
D315	E–8
D317	D–9
D320	D–9
D322	D–9
D323	C–9
D324	E–9
D325	D–8
D326	E–9
D333	C–9
D337	E–8
D344	D–8
D345	E–7
D346	E–7
D347	E–7
D363	E–8
D364	E–8
D401	B–7
D402	B–7
D404	D–6
D405	B–5
D407	D–7
D410	C–5
D411	B–6
D421	C–5
D422	C–5
D425	C–5
D427	B–6
D500	G–5
D501	G–2
D502	E–2
D503	D–2
D504	D–2
D505	E–1
D506	E–2
D507	G–5
D508	F–5
D509	G–5
D510	F–5
D511	E–5
D512	D–2
D513	E–5
D514	E–4
D515	F–1
D516	F–5
D517	E–4
D518	E–5
D519	C–4
D523	A–2
D524	C–2
D525	C–2
D526	B–4
D527	B–3
D528	A–1
D529	A–2
D530	A–1
D531	B–4
D532	B–4
D533	G–2
D534	B–4
D536	A–5
D542	B–4
D546	E–1
D547	D–4
D548	G–2

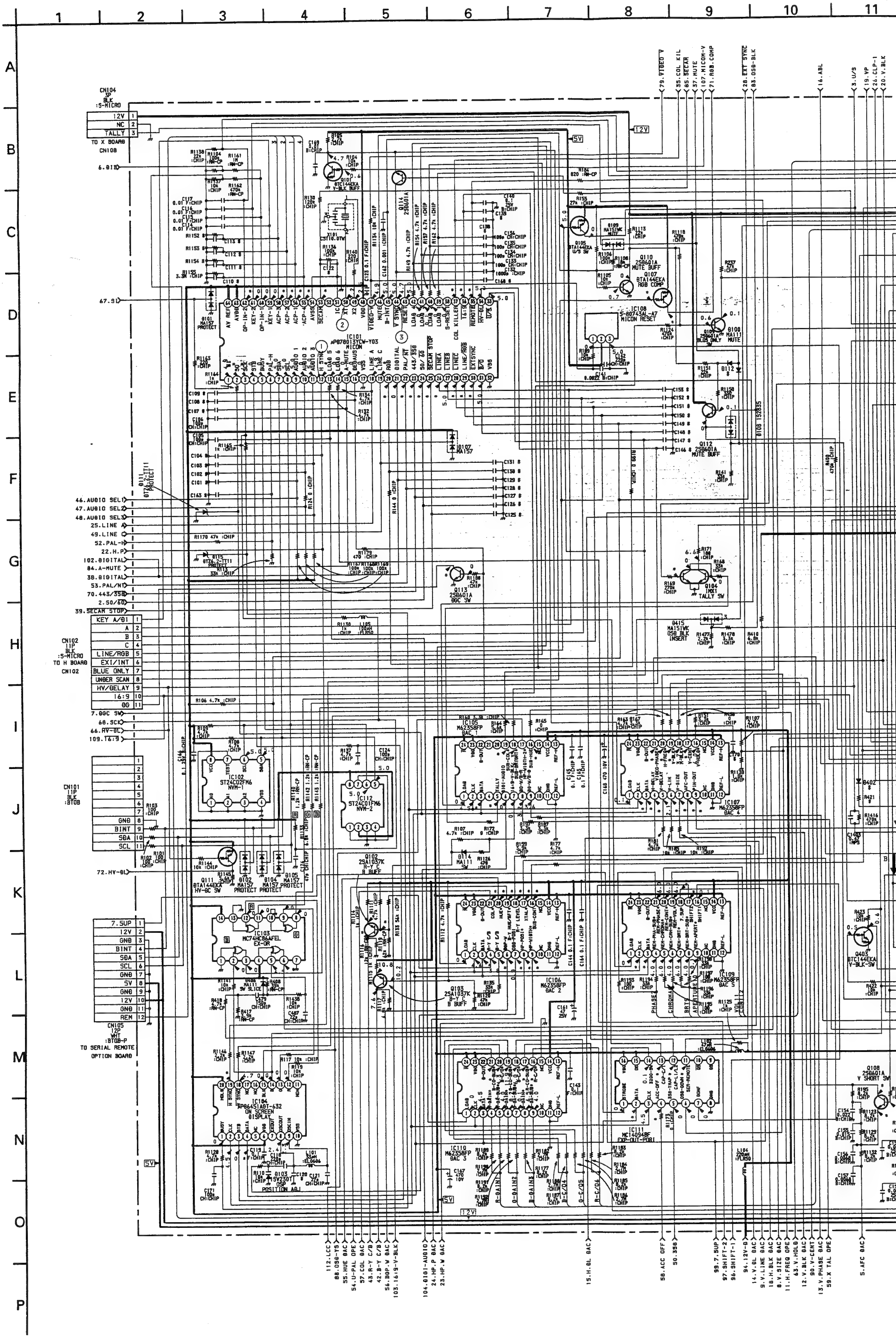
VARIABLE RESISTOR	
RV501	B–2

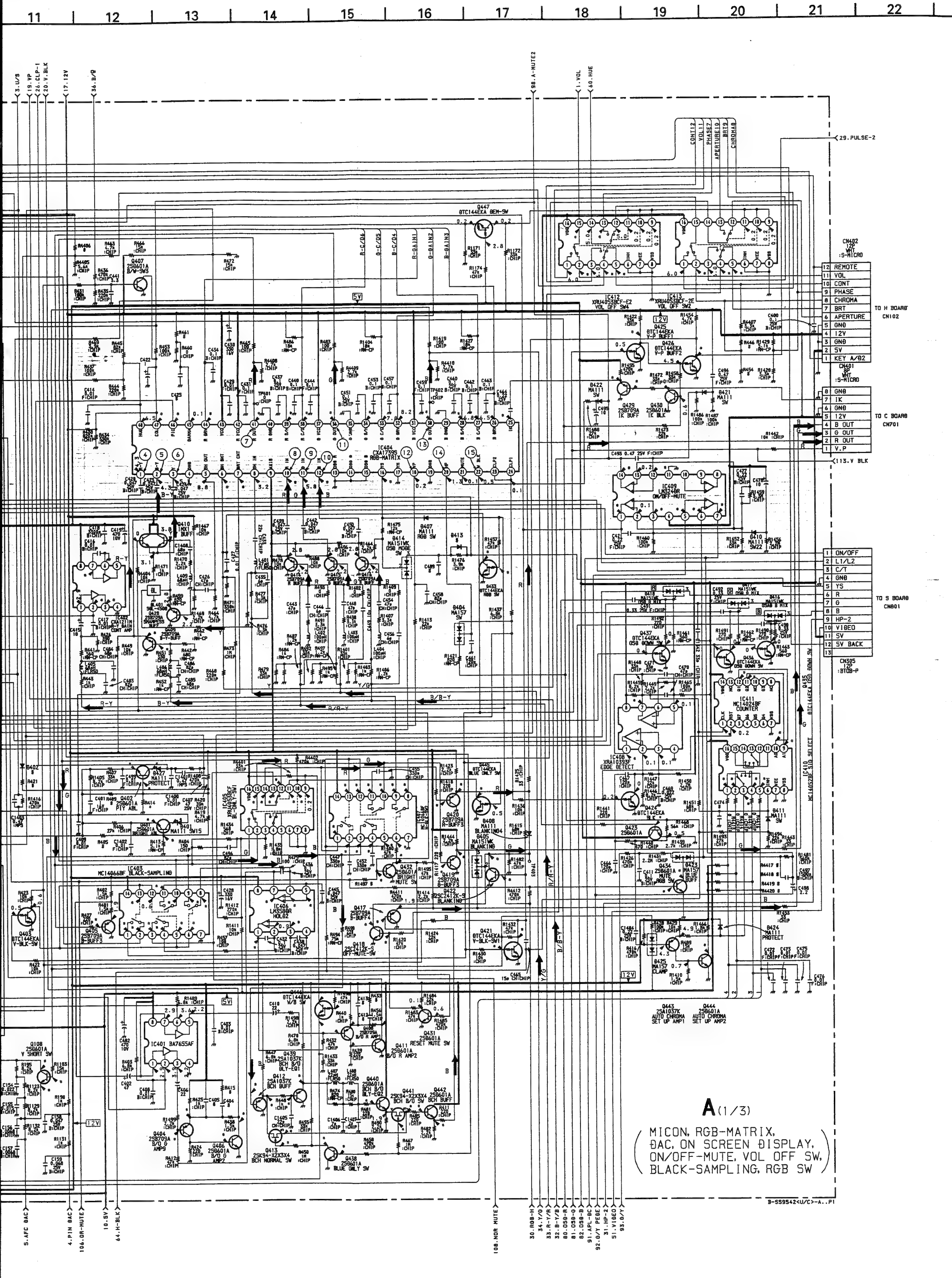
NOTE:
The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.

- ░ : Pattern from the side which enables seeing.
- ▒ : Pattern of the rear side.

–A BOARD– <Conductor Side>

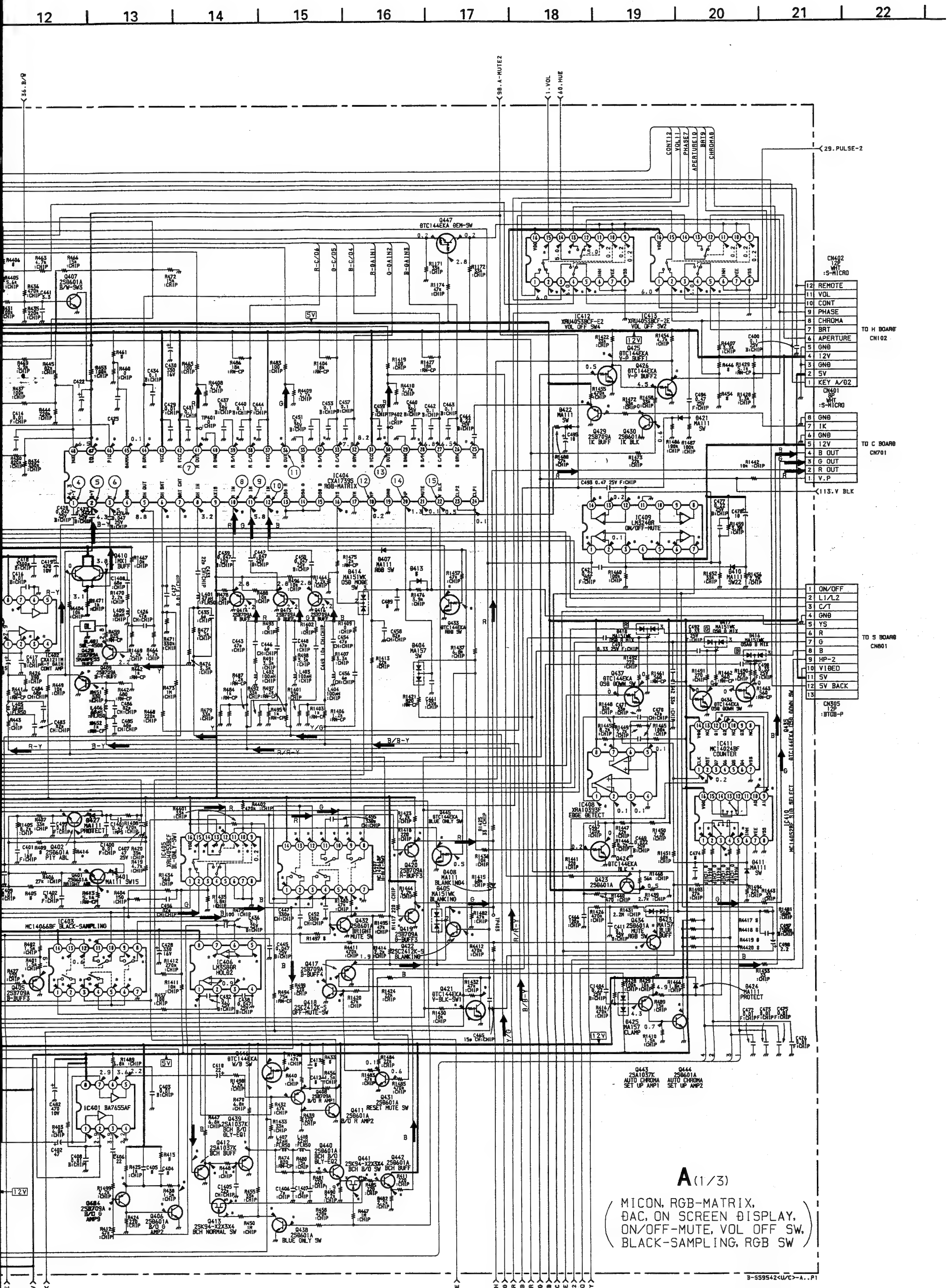



CN104 3P BLK :S-MICRO
12V
NC
TALLY
TO X BOARD CN108
6.BID
67.SI
46.AUDIO SEL1
47.AUDIO SEL2
48.AUDIO SEL3
25.LINE A
49.LINE C
52.PAL-I
22.H.P
102.DIGITAL
84.A-MUTE
38.DIGITAL
53.PAL/NT
70.443/358
2.50/60
39.SECAM STOP
CN102 11P BLK :S-MICRO TO H BOARD CN102
KEY A/D1
LINE/RGB
EXI/INT
BLUE ONLY
UNDER SCAN
HV/DELAY
16:9
DG
7.DDC SV
68.SCK
66.HV-DL
109.16:9
CN101 11P BLK :BTOB
GND
BINT
SDA
SCL
72.HV-DL
7.SUP
12V
REM
CN105 12P WHT :BTOB-P TO SERIAL REMOTE OPTION BOARD
5V
IC101 μPD78013YCW-Y03 MICON
Q101 DTC144EKA V-BLK BUFF
X101 CST10.0TW
Q114 2SB601A
D101 MA157 PROTECT
D111 DTZ6.2-TT11 PROTECT
D115 DTZ6.2-TT11 PROTECT
D107 MA157
Q113 2SB601A DDC SW
IC102 ST24C02FM6 NVM-1
IC112 ST24C01FM6 NVM-2
Q111 DTA144EKA HV-DL SW
D102 MA157 PROTECT
D104 MA157 PROTECT
Q102 2SA1037K R-Y C B BUFF
IC103 MC74HC86AFEL EX-OR
IC104 μPD6451AGT-632 ON SCREEN DISPLAY
D103 1SV230TT OSD POSITION ADJ
Q103 2SA1037K B BUFF
IC105 M62358FP DAC 1
IC106 M62358FP DAC 2
IC107 M62358FP DAC 4
IC109 M62358FP DAC 5
IC110 M62358FP DAC 3
IC111 MC14094BF EXP-OUT-PORT
D114 MA111 SW
Q105 DTA144EKA U/S SW
D109 MA151WK MUTE
Q110 2SB601A MUTE BUFF
Q107 DTA144EKA RGB COMP
IC108 S-80743AL-A7 MICON RESET
Q109 2SB601A BLUE ONLY
Q100 MA111 MUTE
Q112 2SB601A MUTE BUFF
Q104 IMX1 TALLY SW
D415 MA151WK OSD BLK INSERT
Q403 DTC144EKA V-BLK-SW
Q108 2SB601A V SHORT SW
12V
5V
79.VIDEO V
35.COL KIL
85.SECAM
37.MUTE
107.MICOM-V
71.RGB COMP
28.EXT SYNC
83.OSD-BLK
16.ABL
3.U/S
19.VP
26.CLP-1
20.V.BLK
112.LCC
88.OSD-YS
55.HUE DAC
54.U-PAL DPE
57.COL DAC
43.R-Y C/B
42.B-Y C/B
56.BGP.V DAC
103.16:9-V-BLK
104.DIGI-AUDIO
24.HP.P DAC
23.HP.W DAC
15.H.DL DAC
58.ACC OFF
50.358
99.7.5UP
97.SHIFT-2
96.SHIFT-1
94.12V-D
14.V.DL DAC
9.V.LINE DAC
18.H.BLK DAC
8.V.SIZE DAC
11.H.FREQ DPE
63.V.HOLD
12.V.BLK DAC
90.V-CENT
13.V.PHASE DAC
59.X TAL DPE
5.AFC DAC
R-GAIN
G-GAIN
B-GAIN
B-C/O4
G-C/O5
R-C/O6
PHASE
CHROMA
BRT
APERTURE
YUNITY
1 2 3 4 5 6 7 8 9 10 11
A B C D E F G H I J K L M N O P



A(1/3)

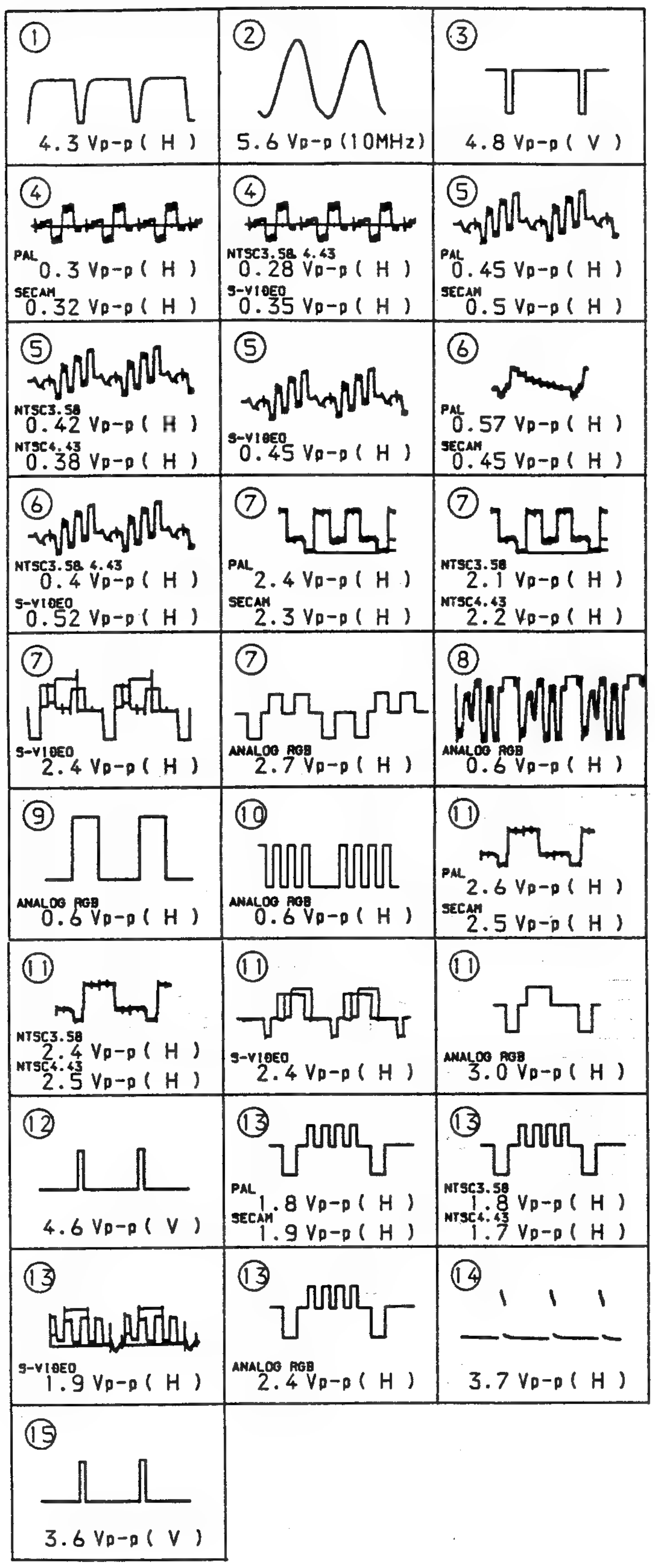
MICON, RGB-MATRIX,
DAC, ON SCREEN DISPLAY,
ON/OFF-MUTE, VOL OFF SW,
BLACK-SAMPLING, RGB SW



A(1/3)

MICON, RGB-MATRIX,
DAC, ON SCREEN DISPLAY,
ON/OFF-MUTE, VOL OFF SW,
BLACK-SAMPLING, RGB SW

·A BOARD WAVEFORMS



A BOARD (1/3) ∗ MARK LIST

	PVM-14M4U/E/A	PVM-14M2U/E/A
CN305	13P : BTOB-P	12P : BTOB-P
R407	33k : CHIP	15 :CHIP
R414	#	3k : CHIP

# : Not Used

A BOARD (1/3) ∗ MARK

	PAL	SECAM	NTSC 3.58	NTSC 4.43	S-VIDEO	ANALOG RGB
IC101 ②	2.3	2.4	2.2	2.2	2.0	2.3
③	4.5	4.6	4.5	4.4	4.4	4.5
⑥	4.1	3.4	0	0.1	0	0
⑫	3.4	3.5	3.5	3.5	3.1	3.5
⑲	0	0	0	0	4.8	0
⑳	0	0	0	0	0	4.9
㉒	4.9	5.0	0	0	0	0
㉓	5.0	5.0	0	5.0	0	0
㉔	5.0	5.0	0	0	0	0
㉕	0	5.0	0	0	0	0
㉖	0.1	0	0.1	0.1	4.9	0.1
㉗	5.0	5.0	5.0	5.0	0	5.0
㉘	5.0	5.0	5.0	5.0	4.9	0.1
㉚	5.0	5.0	5.0	5.0	5.0	0.1
㉟	4.2	4.1	4.6	5.0	3.9	3.9
㊱	4.0	4.0	4.6	5.0	3.6	3.7
㊲	0.3	4.4	0.1	0.7	0.1	0.1
(53)	4.2	0.1	4.3	4.2	4.2	4.3
(55)	4.0	3.4	3.6	3.7	3.9	4.0
(56)	0.5	0.9	1.0	0.8	3.1	1.9
(57)	3.0	2.5	2.6	2.3	3.8	2.2
(59)	3.6	3.0	2.9	3.2	3.9	4.0
(62)	4.0	4.0	4.0	4.0	2.9	4.0
IC103 ⑥	0.2	0	0.2	0.2	0	0
IC104 ④	2.3	2.3	2.2	2.2	2.0	2.3
⑲	3.5	3.5	3.5	3.5	3.1	3.5
IC105 ③	2.3	2.3	2.2	2.2	0	2.3
⑤	0	0.1	0.1	0	11.8	0
⑯	2.6	2.7	2.7	2.6	2.8	2.6
⑲	5.4	5.4	5.4	5.4	6.6	8.1
IC106 ③	2.3	2.3	2.2	2.2	2.1	2.3
⑤	5.4	5.4	5.4	5.4	4.1	5.4
⑦	2.4	2.4	2.4	2.4	0.6	2.4
⑧	7.8	7.8	7.8	7.7	5.5	7.8
⑨	5.1	5.1	5.1	5.1	4.0	5.1
⑯	0.1	10.5	10.5	10.5	10.9	10.5
⑰	3.1	3.1	2.6	3.1	2.7	2.5
⑱	2.4	4.6	2.1	2.2	2.1	3.2
⑲	6.3	6.3	11.9	9.0	10.7	3.7
⑳	3.6	3.6	4.8	3.6	4.3	9.5
㉑	0.8	1.8	0.4	0.3	2.4	3.1
IC107 ②	4.6	4.5	4.5	4.5	4.4	4.5
③	2.3	2.3	2.2	0	2.1	0
④	2.8	2.8	2.8	2.8	3.3	2.8
⑥	1.5	1.4	1.4	1.4	2.3	1.4
⑦	2.9	2.9	2.9	2.9	2.1	2.9
⑧	2.6	2.6	2.6	2.6	2.9	2.6
⑨	2.9	2.9	2.9	2.9	2.6	2.9
⑩	2.6	2.6	2.8	2.8	2.8	2.8
⑲	3.2	3.2	5.4	5.4	5.3	5.4
⑳	4.5	4.6	5.0	5.0	3.7	5.0
㉑	6.3	6.3	6.1	6.1	6.0	6.1
IC109 ②	4.6	4.5	4.5	4.5	4.4	4.4
③	2.3	2.3	2.2	2.2	2.1	2.3
⑰	11.9	11.9	11.9	11.9	11.9	0.1
⑱	11.9	11.9	0.1	0	0.1	11.8
IC110 ③	2.3	2.4	2.2	2.2	2.0	2.2
④	7.2	7.2	7.2	7.2	8.3	7.2
⑮	5.8	5.8	5.8	5.8	6.2	5.8
⑰	11.9	11.9	11.9	11.9	7.8	11.9
㉑	0	7.9	7.9	7.9	7.8	7.9
㉒	3.7	3.7	3.5	3.5	3.5	3.6
IC111 ④	0.3	0.3	0.3	0.3	0	0.3
⑪	0.2	0	0.1	0.1	0.1	0.1
⑫	0	5.0	5.0	5.0	0	5.0
⑬	5.0	5.0	5.0	5.0	0	5.0
IC402 ②	3.1	3.9	2.9	3.0	3.0	3.6
③	0	2.3	2.3	0	2.2	2.2
⑦	2.9	2.9	2.9	0	2.9	2.9
IC403 ①	0.8	0.8	0.8	0.8	0.8	0
②	1.2	1.2	0.8	0.8	1.2	0.9
③	1.4	1.3	0.9	0.9	1.3	0
④	0.8	0.8	0.9	0.9	0.8	1.4
⑤	0.6	0.5	0.6	0.6	0	0.6
⑥	0.5	0.6	0.6	0.6	0.6	0
⑧	1.0	1.0	1.0	1.0	0.8	1.1
⑨	1.6	1.5	1.1	1.1	1.4	1.6
⑩	1.4	1.4	1.0	1.0	1.2	1.5
⑪	0.9	1.0	1.0	1.0	0.8	1.1
⑬	0.6	0.6	0.6	0.6	0	0.6
IC404 ⑥	3.0	3.0	3.0	3.0	4.5	0
⑦	4.9	4.9	4.9	4.9	4.7	6.1
⑩	5.6	5.6	5.6	5.6	5.6	5.8
⑫	5.6	5.6	5.6	5.6	5.6	5.8
⑯	0	0.1	0	0	0	4.4
㉕	3.8	4.0	4.1	4.2	4.0	3.6
㉗	7.1	6.6	8.0	8.0	7.7	7.9
㉛	1.4	1.3	1.2	1.1	1.2	1.4
㉞	7.0	7.3	8.1	7.8	7.8	7.8
㊱	1.4	1.3	1.2	1.1	1.2	1.5
㊳	7.8	7.8	7.7	7.8	8.0	7.7
㊴	6.9	7.1	7.8	7.7	7.6	7.6
㊶	1.2	1.2	1.0	1.0	1.2	1.3
㊹	7.2	7.2	7.2	7.2	8.3	7.2
㊻	7.2	7.2	7.2	7.2	6.9	7.0
㊼	6.6	6.6	6.6	6.6	5.5	0
IC405 ①	1.6	1.5	1.1	1.3	1.4	1.6
②	1.4	1.4	0.9	0	1.2	1.5
③	1.2	1.2	0.9	0	1.1	1.2
④	1.4	1.3	1.0	0	1.2	1.4
⑤	1.3	1.3	1.0	0	1.2	1.4
⑩	0.5	0.5	0.6	1.0	0.3	0.2
⑪	0.5	0.5	0.6	1.3	0.3	0.2
⑫	1.2	1.2	0.8	1.1	1.2	1.3
⑬	1.4	1.3	0.9	1.3	1.3	1.4
⑭	1.2	1.2	0.8	1.2	1.2	1.3
⑮	1.4	1.3	1.0	1.3	1.2	1.5
IC406 ①	4.8	5.1	4.8	4.8	4.8	5.1
③	0.8	0	0.9	0.9	0.8	1.0
⑤	1.0	0.9	1.0	1.0	0.8	1.1
⑥	1.0	1.0	1.1	1.1	0.8	1.1
⑦	5.1	5.1	4.9	4.9	4.9	5.1
IC407 ①	1.2	1.2	0.9	1.2	1.2	1.3
②	0.4	− 0.1	0.5	0.3	0.4	0.5
③	1.4	1.3	1.0	1.3	1.2	1.4
④	0.6	0	0.7	0.5	0.5	0.7
⑤	2.0	1.8	2.0	2.0	2.0	2.0
⑥	11.7	10.7	11.6	11.3	11.7	11.2
⑧	5.5	5.5	5.5	5.5	5.4	8.5
⑨	5.5	5.5	5.5	5.5	5.4	8.4
⑩	1.4	1.4	1.0	1.3	1.2	1.5
⑪	0.6	− 0.1	0.7	0.6	0.5	0.6
⑫	2.0	1.7	2.0	2.0	2.0	2.0
⑬	2.0	1.7	2.0	2.0	2.0	2.0
IC408 ①	3.1	2.9	2.9	3.1	3.7	3.4
⑦	4.1	3.8	3.9	4.1	4.2	4.1
IC409 ①	0	8.8	9.0	9.4	0	7.5
③	0	0.8	0.4	0.3	0.3	1.6
⑤	5.9	5.9	6.3	0	5.9	5.9
⑥	5.9	5.9	6.3	6.0	5.9	5.9
⑦	5.9	5.9	6.3	6.0	5.9	5.9
⑫	0.1	1.8	0.5	1.2	0.1	0
⑭	0	10.7	6.6	6.9	0	10.7

	PAL	SECAM	NTSC 3.58	NTSC 4.43	S-VIDEO	ANALOG RGB
IC410 ①	3.8	4.0	4.0	4.0	0	3.9
②	3.0	3.1	2.4	3.1	0	4.0
③	1.3	0.7	1.4	1.6	2.3	1.5
④	3.5	3.6	3.0	3.8	3.9	3.9
⑤	0.6	1.3	1.1	1.1	3.1	1.7
⑥	4.0	4.0	4.0	3.9	0	0
⑨	0	2.0	1.9	1.8	2.5	1.4
⑩	2.0	2.3	2.3	2.0	1.8	3.0
IC411 ①	4.1	4.0	3.9	3.8	4.2	4.1
⑪	1.8	2.0	1.9	1.8	2.5	1.3
⑫	2.0	2.3	2.3	2.1	1.8	3.0
IC412 ②	0.4	0.5	0.4	0.4	5.9	0.6
④	8.9	8.9	8.9	8.9	8.9	8.3
⑤	9.0	8.9	9.0	8.9	8.9	8.3
⑬	6.0	6.0	6.0	6.0	6.0	0
⑮	0.4	0.5	0.4	0.4	5.9	0.5
IC413 ②	7.9	8.0	8.0	8.0	0	6.9
④	0	5.5	5.5	5.5	5.4	0
⑤	5.5	5.5	5.5	5.5	5.4	8.6
⑫	3.1	3.1	3.1	3.1	0	5.1
⑭	3.1	3.1	3.1	3.1	6.0	5.1
⑮	7.9	7.9	8.0	7.9	6.3	6.9
Q102 B	10.9	10.9	10.9	10.9	10.7	10.9
C	8.1	8.1	8.1	8.1	0	8.1
E	11.5	11.5	11.5	11.5	11.3	11.5
Q104-1 B	− 0.2	0	− 0.2	0	0	− 0.2
Q107 B	5.0	5.0	5.0	5.0	5.0	0.1
C	0	0	0	0	0	5.0
Q108 C	2.6	2.6	2.6	2.6	2.9	2.6
E	2.6	2.6	2.6	2.6	2.9	2.6
Q111 B	5.0	5.0	0	0	4.9	4.9
C	0.4	0.4	0	0	0.4	0.4
Q113 C	4.1	4.3	4.2	4.2	3.8	4.0
Q401 B	1.1	0.8	1.5	1.6	1.2	1.0
C	7.5	5.5	6.0	5.2	8.4	10.0
E	1.4	1.6	3.2	3.4	3.1	1.0
Q402 B	0.5	0.5	0.5	0.5	2.4	0.5
C	9.5	7.7	8.1	7.4	10.4	6.9
E	1.4	1.6	3.2	3.3	3.2	1.0
Q404 B	5.3	4.1	4.9	5.2	5.3	5.2
E	6.1	6.3	6.0	6.1	6.1	6.2
Q405 B	1.3	1.3	1.2	1.1	1.2	1.4
Q406 B	0.7	0.7	0	0.7	0.7	0.7
C	1.6	1.5	1.0	1.5	1.4	1.6
Q407 B	0	0	0	0	0	0.6
C	6.6	6.6	6.6	6.6	5.4	0
Q408 B	5.3	4.7	4.9	5.0	5.2	5.2
E	6.0	6.2	5.9	6.1	6.0	6.1
Q409 B	1.9	1.6	1.6	1.6	1.7	1.6
E	2.0	2.2	2.2	2.2	2.3	2.2
Q411 C	1.4	1.4	0.9	1.3	1.3	1.4
Q412 B	1.3	1.3	1.0	1.3	1.1	1.4
E	2.0	1.9	1.7	1.9	1.8	2.0
Q413 G	2.0	− 15.1	1.6	− 2.2	1.8	− 2.1
D	2.0	1.9	− 4.3	0	2.2	2.0
S	2.0	1.9	1.7	1.9	1.8	2.0
Q417 B	1.4	1.4	1.2	1.2	1.2	1.4
Q418 C	2.1	2.1	1.7	1.7	1.7	2.0
Q419 B	1.4	1.4	1.2	1.1	1.2	1.5
E	2.0	1.9	1.7	1.7	1.8	2.0
Q420 B	1.2	1.2	1.0	1.0	1.2	1.3
E	1.8	1.8	1.6	1.6	1.8	1.9
Q422 C	2.1	2.1	1.7	1.7	1.8	2.0
Q423 B	0.5	0.3	0.4	0.4	0.4	0.2
Q425 C	4.5	4.5	4.5	4.5	4.7	4.5
Q426 C	0.8	0.8	0.7	0.7	0.7	0
Q429 B	0.1	0.8	0.4	0.4	0.1	0.1
E	0	− 2.3	− 1.2	− 1.2	0.4	0.4
Q432 B	− 0.3	− 3.8	− 3.4	− 2.7	− 0.1	− 3.9
C	11.9	11.6	11.8	11.8	12.0	11.6
Q433 B	0	− 0.1	0	0	0	2.7
C	3.0	3.0	3.0	3.0	4.5	0
Q434 B	− 0.1	0	0	0	− 0.1	0.4
C	3.6	4.7	4.5	4.8	2.9	0
Q438 B	− 0.4	− 2.9	− 3.1	− 2.4	0	− 2.4
C	11.7	11.4	11.7	11.7	11.6	11.7
Q439 B	2.0	1.9	1.8	1.7	1.8	2.0
E	2.6	2.5	2.4	2.4	0	2.6
Q440 B	2.6	2.5	2.5	2.5	2.4	2.7
Q441 G	− 1.1	− 13.0	1.7	− 4.8	0	− 0.7
D	2.0	1.9	− 8.1	1.9	1.8	2.0
S	2.0	1.9	1.6	1.9	1.8	2.0
Q442 B	1.3	1.3	1.1	1.1	1.1	2.1
E	0.9	0.9	0.7	0.7	0.7	1.5
Q444 C	1.2	1.1	1.2	1.4	2.2	1.3
Q445 C	0.4	1.2	1.4	1.3	0.3	0.4

Schematic diagram
← A(1/3) board

Schematic diagrams
A(2/3) board ➡

A BOARD (2/3) ∗ MARK

	PAL	SECAM	NTSC 3.58	NTSC 4.43	S-VIDEO	ANALOG RGB
IC301 ①	2.8	0	2.8	3.0	3.0	2.3
②	2.0	0	1.8	1.7	1.7	3.5
IC302 ①	2.9	2.9	2.9	0.3	2.9	2.9
⑤	5.3	5.1	4.5	4.5	4.5	4.5
⑦	10.5	8.4	0	0	0	0
IC303 ⑧	2.3	2.6	2.2	2.2	2.6	2.8
⑭	0.1	4.2	0.6	0.6	0.6	0.1
⑯	3.9	2.8	3.1	3.1	3.3	3.9
IC304 ④	2.2	2.6	2.2	2.2	2.2	2.2
⑨	9.4	0.1	9.4	9.4	9.4	9.4
⑩	7.3	7.3	2.5	2.5	2.6	2.5
⑪	7.3	7.3	2.5	2.6	2.6	2.5
⑭	1.9	1.9	2.2	2.2	2.2	2.2
⑮	2.5	2.5	2.2	2.2	2.3	2.2
IC305 ①	2.8	2.8	2.8	0	2.8	2.8
④	2.5	1.1	2.5	2.4	2.4	1.3
⑦	4.1	4.1	4.1	4.1	4.2	4.5
⑨	0.4	0.2	0	0	0	0.1
⑫	2.6	2.6	2.5	2.4	2.5	2.7
⑳	0	0	0.8	0.8	0.9	0.9
㉙	2.1	2.7	1.9	1.9	1.9	2.7
IC306 ①	8.1	8.1	8.1	8.1	8.1	0
②	0	0	0	0.1	0.1	4.4
IC309 ②	3.6	0	3.6	3.6	3.6	3.6
④	0	0	0	0	0	4.4
IC310 ①	6.2	6.2	6.2	6.2	6.2	5.9
③	6.3	6.3	6.2	6.2	6.2	5.9
⑬	5.9	5.9	6.0	6.3	5.9	5.9
IC311 ①	0	6.2	6.2	6.2	6.2	6.2
②	6.2	6.2	6.2	6.2	6.2	5.9
④	6.2	6.3	6.3	6.2	6.2	5.9
⑥	3.3	3.3	2.9	2.9	2.9	0
⑩	5.9	5.9	5.9	6.2	5.8	5.9
⑬	0.4	0.4	0.4	0.4	0.5	0.7
IC312 ②	3.6	0	3.6	3.6	3.6	3.6
④	0	0	0	12.0	0.1	4.5
IC313 ①	0	6.3	0	6.3	6.3	6.3
IC314 ②	0	3.0	7.6	0	3.0	0
④	0	0	0	0	2.9	0.1
IC315 ①	0.4	0.4	0.4	0.4	0.4	0.6
④	0.6	0	0.6	0.6	0.6	0.6
⑨	9.4	9.3	9.3	9.2	9.3	9.4
⑪	2.5	2.5	2.5	2.5	2.5	7.2
⑭	0.4	0.4	0.4	0.4	0.4	0.6
⑮	0.4	0.4	0.4	0.4	0.4	0.6
IC317 ④	2.0	0	2.0	2.1	2.0	12.0
⑥	12.0	0	12.0	12.0	12.0	12.0
⑨	10.7	10.6	10.6	10.6	10.5	10.7
⑭	9.4	9.4	9.4	9.4	9.1	9.4
IC318 ⑤	11.5	11.5	0	11.4	11.4	11.4
IC320 ①	6.3	6.3	6.3	6.3	6.3	0
②	3.0	0	0	3.1	0	0
④	0	0	0	0	3.3	0
IC321 ②	0	0.1	0.1	0	2.9	0
④	0	0	0	0	0.1	2.7
IC322 ⑤	5.8	5.9	6.0	6.3	5.9	5.9
IC323 ⑤	6.2	6.3	6.2	6.2	6.2	5.9
⑦	0	5.6	5.6	5.6	5.6	5.6
IC324 ⑤	6.2	6.2	6.2	6.2	6.2	5.9
IC326 ①	5.9	5.9	6.0	6.3	5.9	5.9
②	5.9	5.9	5.9	6.2	5.8	5.9
③	5.9	5.9	5.9	6.2	5.8	5.9
⑤	1.7	1.9	1.6	1.6	2.1	2.1
⑥	2.4	1.0	2.3	2.3	2.3	4.6
⑦	0	– 0.1	10.8	0	– 0.1	0
⑧	6.3	6.3	6.3	6.3	6.2	5.9
⑨	6.3	6.3	6.3	6.3	6.2	5.9
⑩	6.3	6.3	6.2	6.2	6.2	5.9

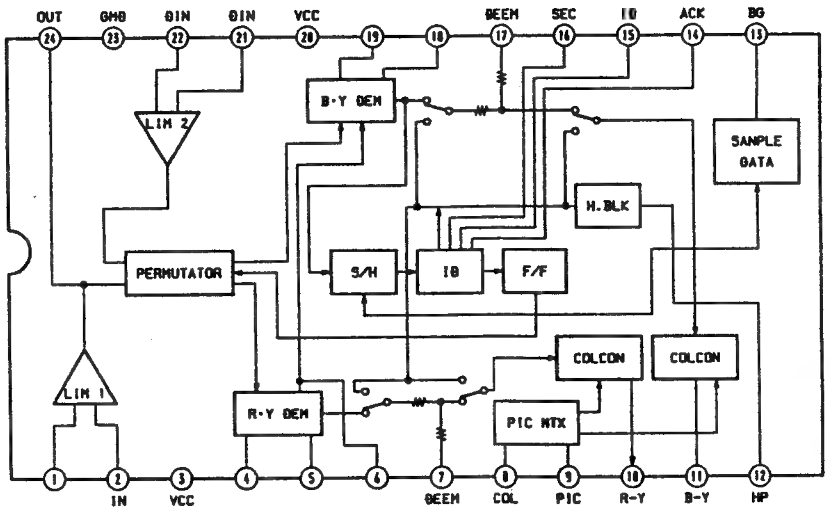
	PAL	SECAM	NTSC 3.58	NTSC 4.43	S-VIDEO	ANALOG RGB
IC326 ⑫	6.2	6.2	6.2	6.2	6.2	5.9
⑬	6.2	6.2	6.2	6.3	6.2	5.9
⑭	6.2	6.2	6.2	6.2	6.2	5.9
IC350 ①	6.6	6.5	6.4	6.3	6.1	6.9
②	6.2	6.2	6.2	6.3	6.0	6.4
③	6.2	6.2	6.2	6.3	6.0	6.4
Q300 B	2.5	2.5	2.2	2.2	2.2	2.2
C	10.2	10.2	10.4	10.5	10.4	10.5
E	1.9	1.9	1.6	1.6	1.6	1.6
Q301 E	8.6	8.5	8.2	8.3	8.5	9.8
Q303 E	5.7	5.7	5.7	5.7	5.5	5.7
Q304 B	6.3	6.3	6.3	6.4	6.2	6.3
E	5.7	5.7	5.7	5.7	5.5	5.7
Q305 B	8.6	8.5	8.2	8.3	8.5	9.8
E	7.9	7.9	7.6	7.7	7.9	9.1
Q307 E	1.4	1.4	1.1	1.2	1.4	2.7
Q309 B	1.4	1.4	1.1	1.2	1.4	2.6
C	0.1	0.1	0.2	0.1	0.1	0
E	0.7	1.8	1.7	1.8	0	1.8
Q312 C	8.2	8.2	8.6	8.3	8.3	8.1
Q313 B	8.2	8.2	8.6	8.3	8.2	8.1
E	8.8	8.8	9.3	9.0	8.9	8.7
Q314 B	11.9	6.4	11.9	11.9	11.9	11.9
C	0	11.9	0	0	0	0
Q315 B	3.3	3.2	2.9	3.1	3.2	3.3
E	3.9	3.9	3.5	3.8	3.8	4.0
Q318 B	12.1	12.0	11.7	11.9	12.1	12.1
C	1.0	1.0	1.2	1.0	1.0	0.9
Q322 B	2.4	2.4	2.3	2.3	5.6	2.4
E	1.8	1.8	1.8	1.8	5.0	1.8
Q323 B	5.0	5.0	0	0	0	0
C	0	0	3.5	3.5	3.5	3.6
Q324 B	4.1	4.2	0	0	0	0
C	0	0	0.8	0.8	0.8	0.9
Q328 B	2.2	2.2	2.2	2.2	2.0	1.3
C	2.8	2.8	2.8	2.8	0	0
Q329 D	2.1	2.1	2.2	2.4	0	2.2
G	0	0	1.6	0	2.9	2.8
Q332 B	4.9	5.0	0	4.9	0	0
C	0	0	4.4	0	4.3	4.4
Q333 B	1.7	1.7	1.9	1.8	1.7	1.7
E	1.5	1.5	1.7	1.5	1.5	1.4
Q336 G	4.7	4.6	4.6	4.7	4.2	4.8
D	4.3	4.3	4.3	4.3	4.5	4.3
Q339 B	12.3	12.5	12.5	12.4	12.5	12.3
Q347 B	0.1	4.2	0.1	0.1	0.6	0.1
C	9.4	0.1	9.4	9.4	9.4	9.4
Q349 B	2.8	2.7	2.7	2.7	2.2	2.8
E	3.4	3.3	3.4	3.4	2.8	3.4
Q354 B	12.0	0.6	0	0	0	0
E	12.0	0.4	0	0	0	– 0.2
Q358 E	2.2	2.2	0	2.2	2.2	2.2
Q360 1	6.2	6.2	6.2	6.3	6.1	6.4
3	6.2	6.2	6.2	6.3	6.0	6.4
5	1.3	4.7	2.2	4.1	5.3	3.8
Q361 B	4.9	4.9	5.0	5.0	5.0	0.8
C	0.1	0	0	0	0.1	4.9
Q362 C	9.0	9.0	9.0	9.5	9.2	8.5
Q364 C	3.3	3.3	2.9	2.9	2.8	2.9
Q365 B	0.4	0	0.3	0.3	0.4	0.4
Q369 B	0.8	0.9	0.8	0.8	0.9	4.9
Q372 B	0	0	0	0	0	4.9
C	11.7	11.7	11.8	11.8	11.7	0
Q374 B	10.4	10.3	10.1	10.3	10.7	6.4
C	0	0	0	0	6.2	6.7
E	6.4	6.4	6.3	6.3	6.1	6.7
Q375 B	10.7	10.8	10.7	10.7	10.7	5.9
C	0	0	0	0	6.3	6.4
E	6.2	6.2	6.2	6.2	6.0	6.4

A BOARD (2/3) ∗ MARK LIST

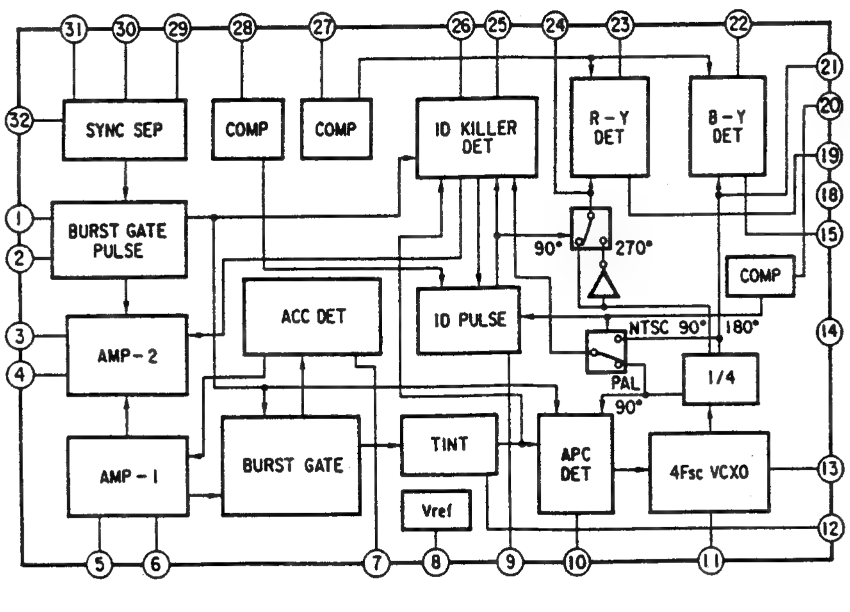
	PVM-14M4U/E/A	PVM-14M2U/E/A
C525	0.011 2kV : PP	0.01 2kV : PP
C527	#	470P 2kV
C553	0.082 200V : PT	#
C1520	150P 2kV B	#
C1524	100	#
C1525	0.0047 2kV E	#
C1537	0.33 100V : MPS	#
CN508	2P WHT : MINI	#
D544	MA111	#
D545	MA111	#
D546	V11N	#
D548	RD16ESB2	#
Q526	2SC4686A	#
Q527	2SC4686A	#
Q531	2SA1037K	#
Q532	IRF520	#
R559	330k : CHIP	220k : CHIP
R562	47 1/4W : FPRD	#
R566	47k: RN-CP	27k : RN-CP
R574	47k : CHIP	#
R577	10k : CHIP	#
R581	1k : CHIP	#
R1501	12k : CHIP	10k : CHIP
R1539	100k : CHIP	#
R1542	22 : FPRD	#
R1580	47k : CHIP	#
R1581	10M 1W : RS	#
R1582	2M 1W : RS	#
R1583	470 1/2W : RF	#
R1599	10k 1/2W : RC	#
R2502	22k : CHIP	18k : CHIP
R2504	150k : CHIP	100k : CHIP
T501	1-453-233-11	1-453-232-11
T502	DFT	#

# : Not Used

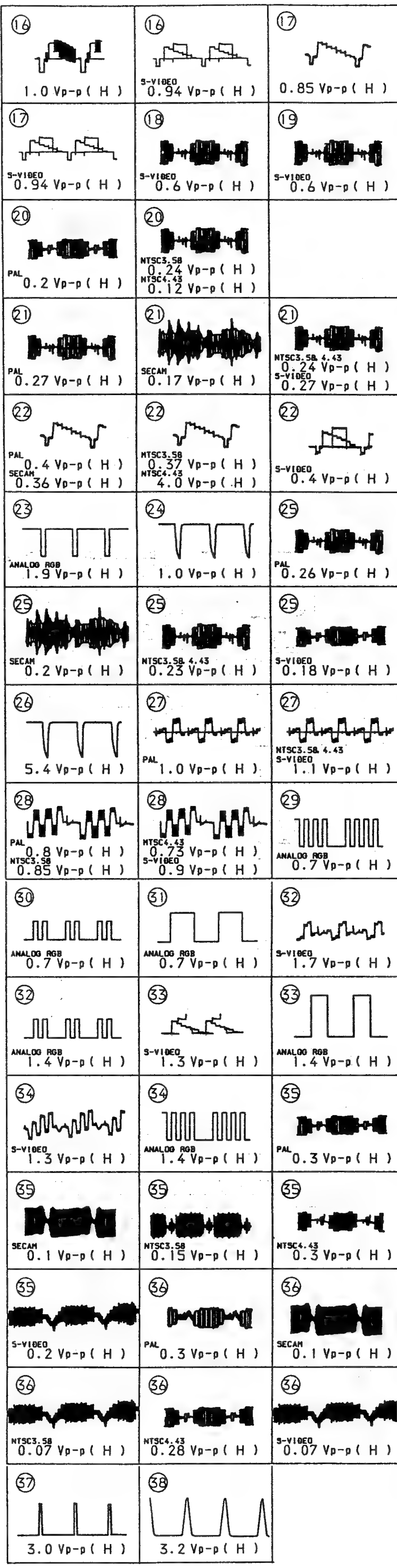
A BOARD IC303 CXA1214P

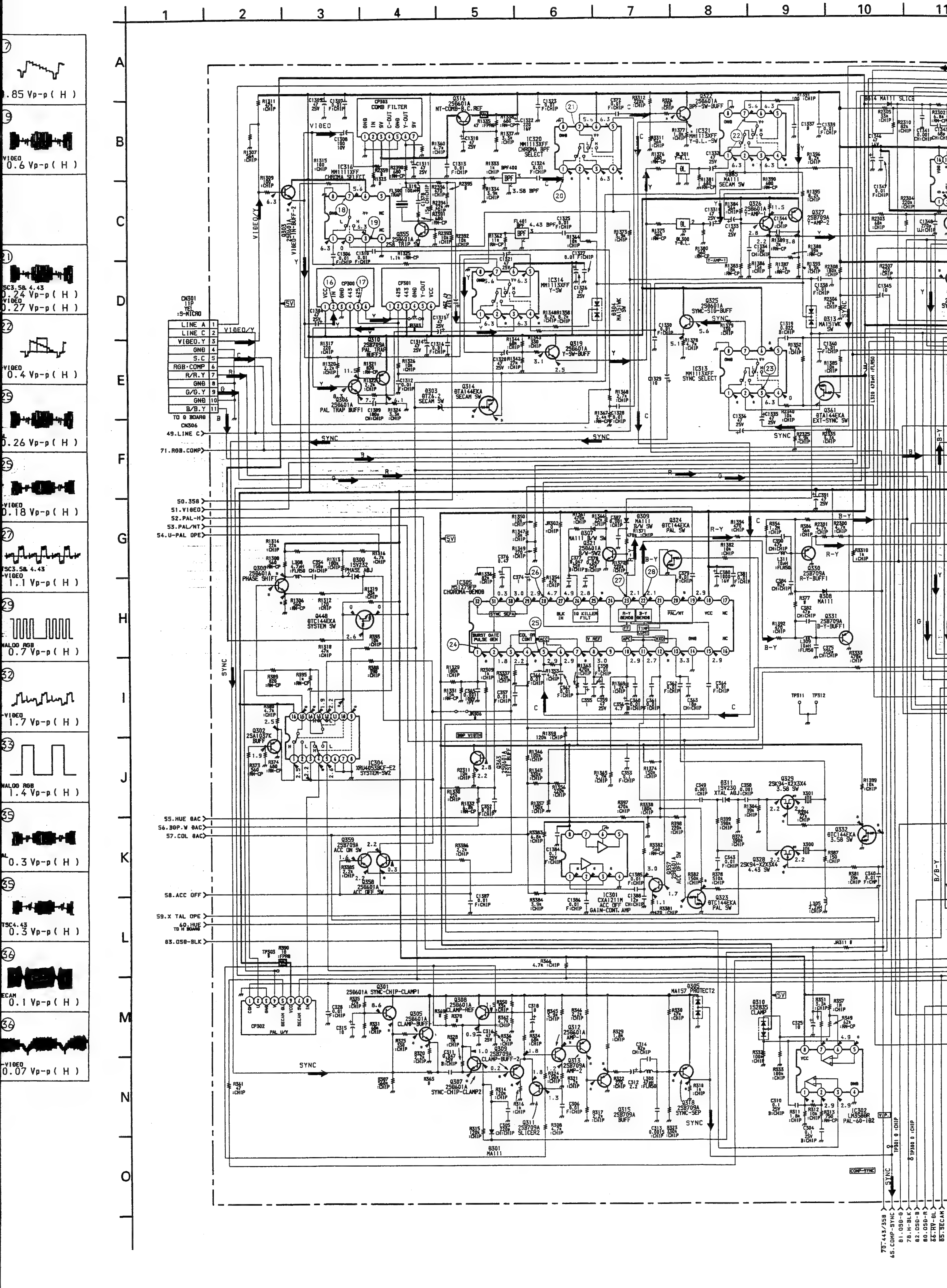


A BOARD IC305 M51279FP



·A BOARD WAVEFORMS





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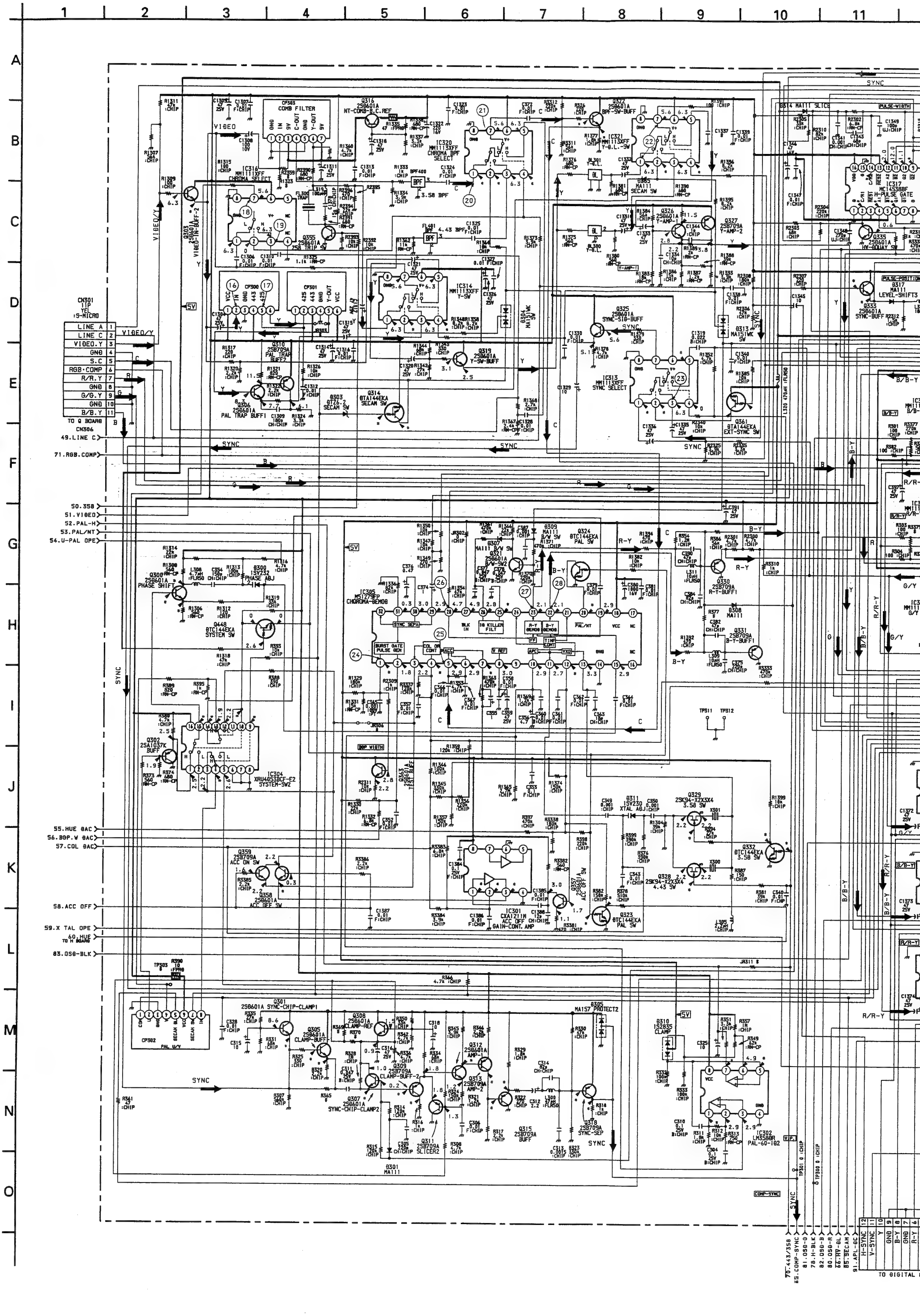
.85 Vp-p (H)
VIDEO
0.6 Vp-p (H)
SC3.58 4.43
0.24 Vp-p (H)
VIDEO
0.27 Vp-p (H)
VIDEO
0.4 Vp-p (H)
0.26 Vp-p (H)
VIDEO
0.18 Vp-p (H)
TSC3.58 4.43
VIDEO
1.1 Vp-p (H)
ANALOG RGB
0.7 Vp-p (H)
VIDEO
1.7 Vp-p (H)
ANALOG RGB
1.4 Vp-p (H)
0.3 Vp-p (H)
TSC4.43
0.3 Vp-p (H)
SECAM
0.1 Vp-p (H)
VIDEO
0.07 Vp-p (H)
CN301
11P
YEL
:S-MICRO
LINE A
LINE C
VIDEO.Y
GND
S.C
RGB.COMP
R/R.Y
GND
G/G.Y
GND
B/B.Y
TO Q BOARD
CN306
49.LINE C
71.RGB.COMP
50.358
51.VIDEO
52.PAL-H
53.PAL/NT
54.U-PAL OPE
55.HUE OAC
56.BOP.W OAC
57.COL OAC
58.ACC OFF
59.X TAL OPE
60.HUE TO H BOARD
83.OSD-BLK
CP303 COMB FILTER
IC316 MM1111XFF CHROMA SELECT
Q316 2SB601A NT-COMB-B.C.REF
IC320 MM1113XFF CHROMA BPF SELECT
Q322 2SB601A BPF-SW-BUFF
IC321 MM1113XFF Y-B.L.-SW
Q385 MA111 SECAM SW
Q326 2SB601A Y-AMP-1
Q327 2SB709A Y-AMP-2
Q303 2SB601A VIDEO-IN-BUFF-2
Q355 2SB601A 258 TRIP SW
CP300
CP301
IC314 MM1113XFF Y-SW
D304 MA151WK SW
Q325 2SB601A SYNC-SIG-BUFF
IC313 MM1113XFF SYNC SELECT
Q361 8TA144EKA EXT-SYNC SW
Q310 2SB709A PAL TRAP BUFF2
Q306 2SB601A PAL TRAP BUFF1
D303 8TZ6.2 SECAM SW
Q314 8TA144EKA SECAM SW
Q319 2SB601A Y-SW-BUFF
Q300 2SB601A PHASE SHIFT
D300 1SV232 PHASE ADJ
Q448 8TC144EKA SYSTEM SW
IC305 M51279FP CHROMA-DEMOD
SYNC SEPA
BURST GATE PULSE GEN
COL OR CONT
ACC
V REF
APC
VXO
KILLER FILT
R-Y DEMOD
B-Y DEMOD
PAL/NT
VCC
GND
Q309 MA111 B/W SW
Q307 MA111 B/W SW
Q321 2SB601A B/W-SW2
Q324 8TC144EKA PAL SW
Q330 2SB709A R-Y-BUFF1
Q308 MA111
Q331 2SB709A B-Y-BUFF1
Q302 2SA1037K BUFF
IC304 XRU4053BCF-E2 SYSTEM-SW2
Q363 TEST BUFF
BOP WIDTH
Q311 1SV230 XTAL ADJ
Q329 2SK94-X2X3X4 3.58 SW
Q332 8TC144EKA 3.58 SW
Q328 2SK94-X2X3X4 4.43 SW
X301
X300
Q359 2SB709A ACC ON SW
Q358 2SB601A ACC OFF SW
IC301 CXA1211M ACC OFF GAIN-CONT. AMP
Q357 2SB601A ACC OFF SW
Q323 8TC144EKA PAL SW
TP311
TP312
CP302 PAL U/V
Q301 2SB601A SYNC-CHIP-CLAMP1
Q305 2SB601A CLAMP-BUFF
Q308 2SB601A CLAMP-REF
Q309 2SB709A CLAMP-BUFF-2
Q307 2SB601A SYNC-CHIP-CLAMP2
Q312 2SB601A AMP-1
Q313 2SB709A AMP-2
Q311 2SB709A SLICER2
D301 MA111
Q315 2SB709A BUFF
Q318 2SB709A SYNC-SEP
D305 MA157 PROTECT2
D310 1S2835 CLAMP
IC302 LM358BR PAL-60-182
COMP-SYNC
SYNC
VIDEO/Y
5V
70.443/358
65.COMP-SYNC
81.OSD-G
78.H-BLK
82.OSD-B
80.OSD-R
85.SECAM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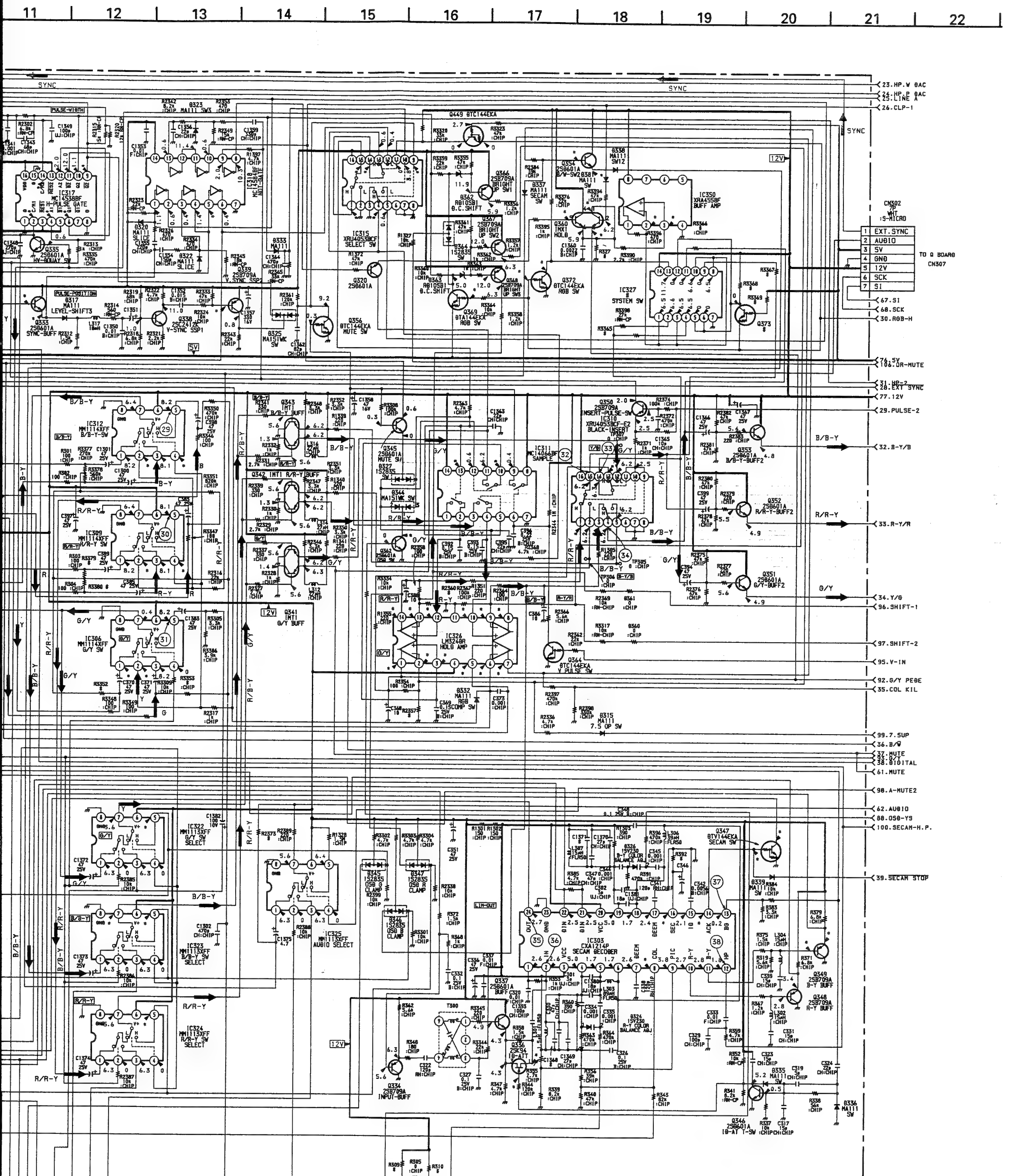
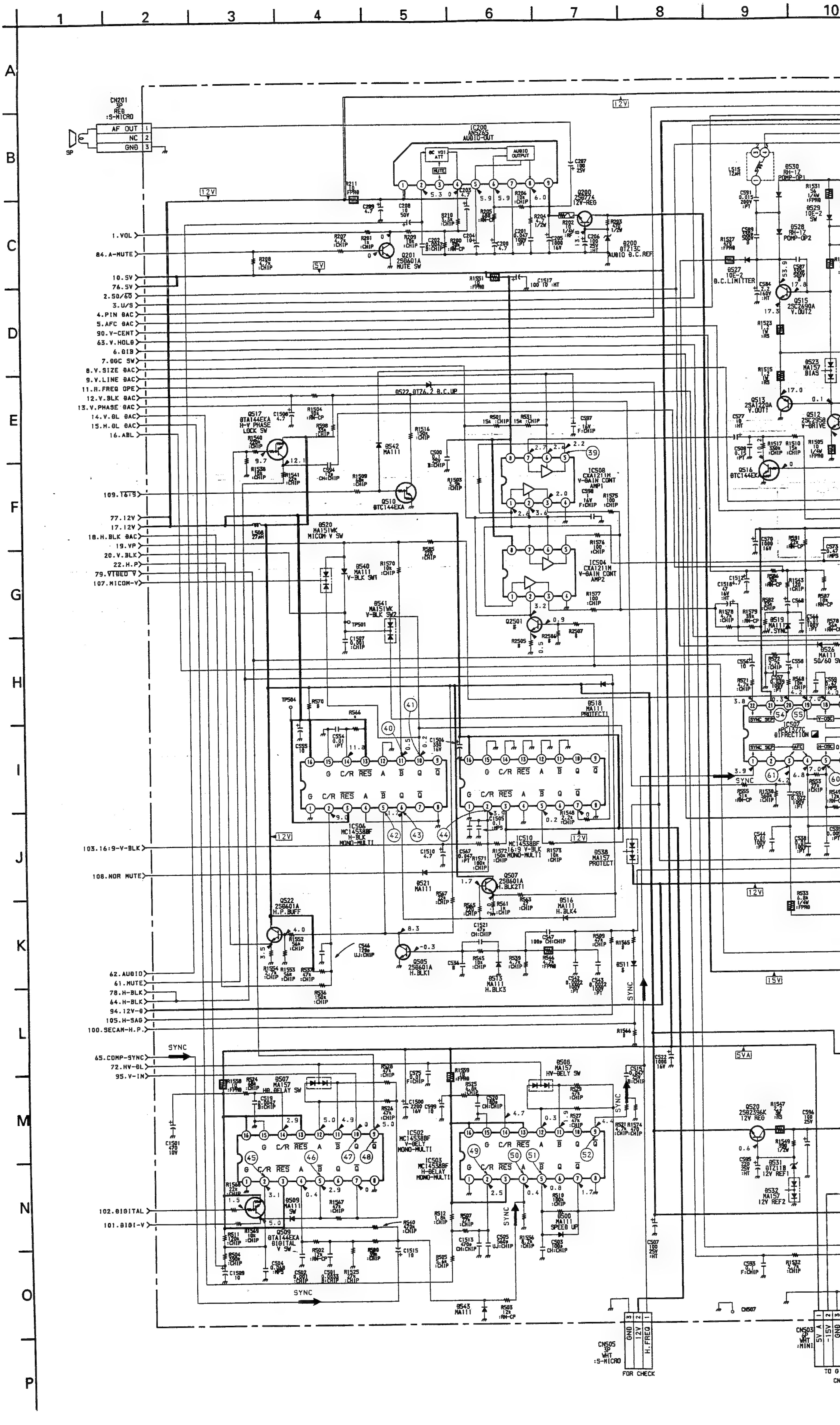
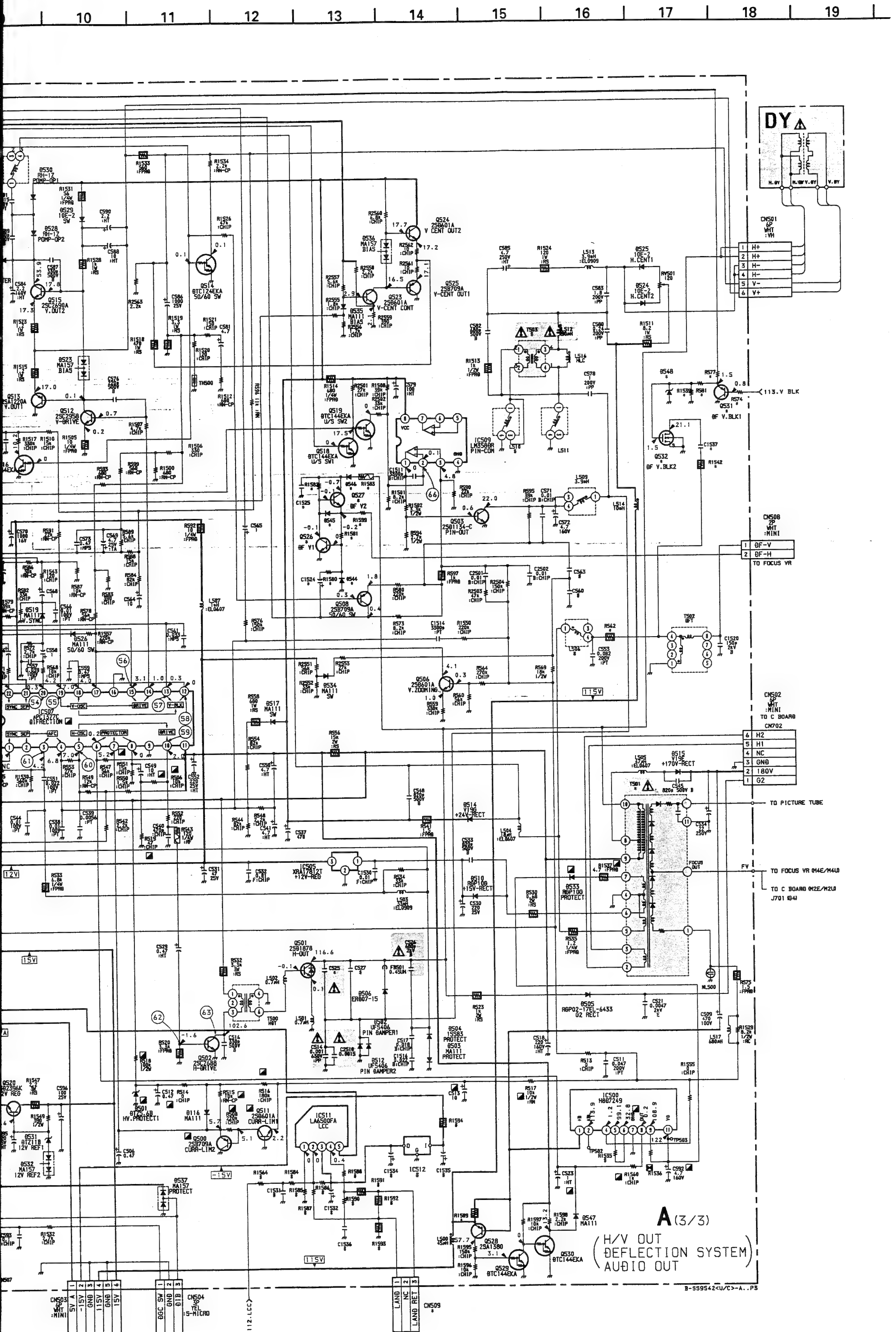
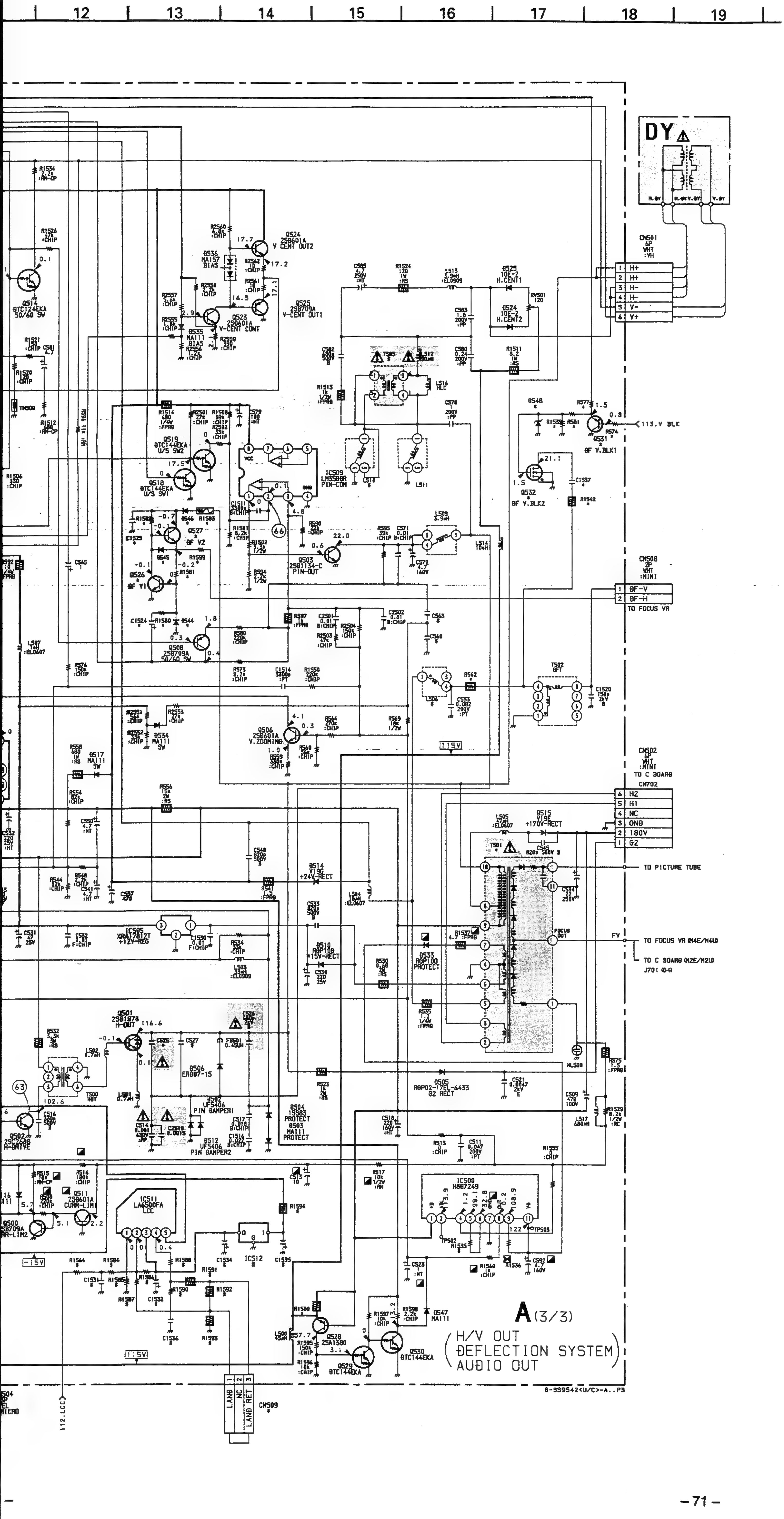
CN301
11P
YEL
:S-MICRO
LINE A
LINE C
VIDEO.Y
GND
S.C
RGB·COMP
R/R.Y
GND
G/G.Y
GND
B/B.Y
TO Q BOARD
CN306
49.LINE C
71.RGB.COMP
50.358
51.VIDEO
52.PAL-H
53.PAL/NT
54.U-PAL OPE
55.HUE GAC
56.BGP.W GAC
57.COL GAC
58.ACC OFF
59.X TAL OPE
60.HUE
TO H BOARD
83.OSG-BLK
VIDEO/Y
VIDEO
SYNC
CP303
COMB FILTER
Q316
2SB601A
NT-COMB-B.C.REF
IC320
MM1113XFF
CHROMA BPF SELECT
Q327
2SB601A
BPF-SW-BUFF
IC321
MM1113XFF
Y-B.L.-SW
Q314 MA111 SLICE
PULSE-WIDTH
IC317
MC14538BF
H-PULSE GATE
Q335
2SB601A
HV-DELAY SW
IC316
MM1113XFF
CHROMA SELECT
Q355
2SB601A
258 TRIP SW
Q303
2SB601A
VIDEO-IN BUFF-2
3.58 BPF
4.43 BPF
IC314
MM1113XFF
Y-SW
Q385
MA111
SECAM SW
Q326
2SB601A
Y-AMP-1
Q327
2SB709A
Y-AMP-2
PULSE-POSITION
Q317
MA111
LEVEL-SHIFT3
Q333
2SB601A
SYNC-BUFF
CP300
CP301
Q325
2SB601A
SYNC-SIG-BUFF
Q313
MA151WK
SW
Q304
MA151WK
SW
Q310
2SB709A
PAL TRAP BUFF2
Q319
2SB601A
Y-SW-BUFF
IC313
MM1113XFF
SYNC SELECT
Q306
2SB601A
PAL TRAP BUFF1
Q303
QTZ6.2
SECAM SW
Q314
DTA144EKA
SECAM SW
Q361
DTC144EKA
EXT-SYNC SW
Q300
2SB601A
PHASE SHIFT
Q300
1SV232
PHASE ADJ
Q448
DTC144EKA
SYSTEM SW
IC305
M51279FP
CHROMA-DEMOD
SYNC SEPA
BURST GATE PULSE GEN
COL ON CONT
ACC
V REF
APC
VXO
BLK IN
ID KILLER FILT
R-Y DEMOD
B-Y DEMOD
TINT CONT
PAL/NT
VCC
GND
NC
Q309
MA111
B/W SW
Q307
MA111 B/W SW
Q321
2SB601A
B/W-SW2
Q324
DTC144EKA
PAL SW
Q330
2SB709A
R-Y-BUFF1
Q308
MA111
Q331
2SB709A
B-Y-BUFF1
R-Y
B-Y
Q302
2SA1037K
BUFF
IC304
XRU4053BCF-E2
SYSTEM-SW2
BGP WIDTH
Q363
2SB601A
Q311
1SV230
XTAL ADJ
Q329
2SK94-X2X3X4
3.58 SW
Q328
2SK94-X2X3X4
4.43 SW
Q332
DTC144EKA
3.58 SW
Q359
2SB709A
ACC ON SW
Q358
2SB601A
ACC OFF SW
IC301
CXA1211N
ACC OFF
GAIN-CONT. AMP
Q357
2SB601A
ACC OFF SW
Q323
DTC144EKA
PAL SW
TP311
TP312
TP303
CP302
PAL U/V
Q301
2SB601A SYNC-CHIP-CLAMP1
Q305
2SB601A
CLAMP-BUFF
Q308
2SB601A
CLAMP-REF
Q309
2SB709A
CLAMP-BUFF-2
Q307
2SB601A
SYNC-CHIP-CLAMP2
Q312
2SB601A
AMP-1
Q313
2SB709A
AMP-2
Q311
2SB709A
SLICER2
D301
MA111
Q315
2SB709A
BUFF
Q305
MA157 PROTECT2
Q318
2SB709A
SYNC-SEP
D310
1S2835
CLAMP
IC302
LM358DR
PAL-60-102
COMP-SYNC
TP301
TP300
70.443/358
65.COMP-SYNC
81.OSD-G
78.H-BLK
80.OSD-R
82.OSD-B
85.SECAM
86.HV-DL
91.APL-DC
V-SYNC
H-SYNC
Y
GND
B-Y
GND
R-Y
TO DIGITAL
B/B-Y
R/R-Y
G/Y
5V



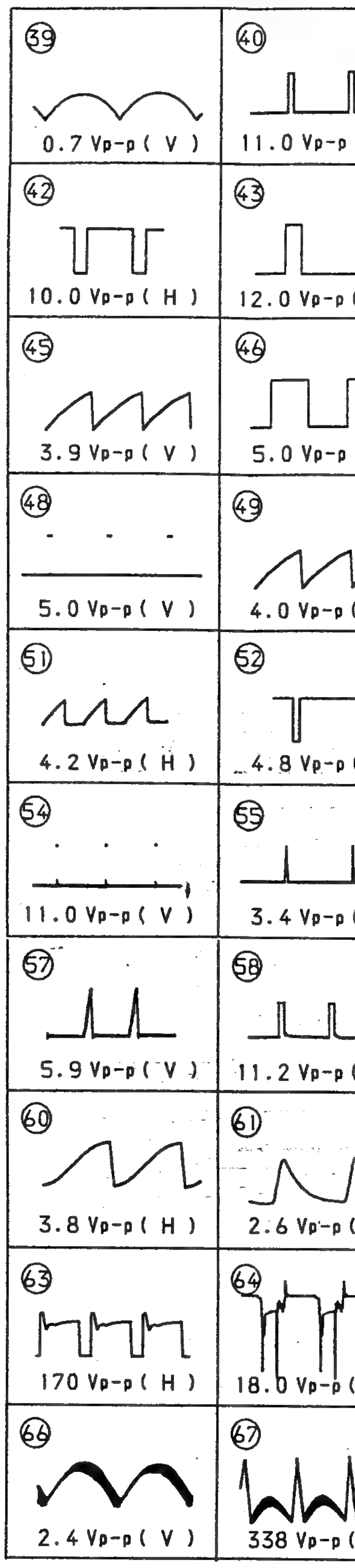
A(2/3) CHROMA DEMOD, SECAM CHROMA SELECT
SYSTEM SW, SYNC SELECT, B-B-Y SW,
R/R-Y SW, G/Y SW, AUDIO SELECT
SECAM DECODER HOLD AMP


1
2
3
4
5
6
7
8
9
10
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P
CN201 3P RED :S-MICRO
AF OUT
NC
GND
SP
IC200 AN5265 AUDIO-OUT
DC VOL ATT
MUTE
AUDIO OUTPUT
12V
Q200 2SD774 12V-REG
Q201 2SD601A MUTE SW
D200 DTZ13C AUDIO D.C.REF
1.VOL
84.A-MUTE
10.5V
76.5V
2.50/60
3.U/S
4.PIN DAC
5.AFC DAC
90.V-CENT
63.V.HOLD
6.DID
7.DDC SW
8.V.SIZE DAC
9.V.LINE DAC
11.H.FREQ DPE
12.V.BLK DAC
13.V.PHASE DAC
14.V.DL DAC
15.H.DL DAC
16.ABL
109.16:9
77.12V
17.12V
18.H.BLK DAC
19.VP
20.V.BLK
22.H.P
79.VIDEO V
107.MICOM-V
103.16:9-V-BLK
108.NOR MUTE
62.AUDIO
61.MUTE
78.H-BLK
64.H-BLK
94.12V-D
105.H-SAG
100.SECAM-H.P.
65.COMP-SYNC
72.HV-DL
95.V-IN
102.DIGITAL
101.DIGI-V
SYNC
5V
D522 DT6.2 D.C.UP
Q517 DTA144EKA H-V PHASE LOCK SW
D542 MA111
Q510 DTC144EKA
D520 MA151WK MICOM V SW
D540 MA111 V-BLK SW1
D541 MA151WK V-BLK SW2
TP501
IC508 CXA1211M V-GAIN CONT AMP1
IC504 CXA1211M V-GAIN CONT AMP2
Q2501
TP504
IC506 MC14538BF H-BLK MONO-MULTI
IC510 MC14538BF 16:9 V-BLK MONO-MULTI
D518 MA111 PROTECT1
D538 MA157 PROTECT
G C/R RES A B Q Q
Q507 2SD601A H.BLK2T1
D521 MA111
D516 MA111 H.BLK4
Q522 2SD601A H.P.BUFF
Q505 2SD601A H.BLK1
D513 MA111 H.BLK3
D511
D507 MA157 HD.DELAY SW
IC502 MC14538BF V-DELY MONO-MULTI
IC503 MC14538BF H-DELAY MONO-MULTI
D508 MA157 HV-DELY SW
D509 MA111
Q509 DTA144EKA DIGITAL V SW
D500 MA111 SPEED UP
D543 MA111
CN505 3P WHT :S-MICRO
GND 12V H.FREQ
FOR CHECK
CN507
D530 RH-1Z PUMP-UP1
D528 RH-1Z PUMP-UP2
D529 10E-2 SW
D527 10E-2 D.C.LIMITTER
Q515 2SC2690A V.OUT2
D523 MA157 BIAS
Q513 2SA1220A V.OUT1
Q512 2SC2958 V-DRIVE
Q516 DTC144EKA
D519 MA111 V.SYNC
D526 MA111 50/60 SW
IC507 uPC1377C DEFLECTION
SYNC SEP
V-OSC
AFC
H-OSC
15V
5VA
Q520 2SD2396K 12V REG
D531 DTZ11B 12V REF1
D532 MA157 12V REF2
CN503 6P WHT :MINI
5V
-15V
GND
TO G

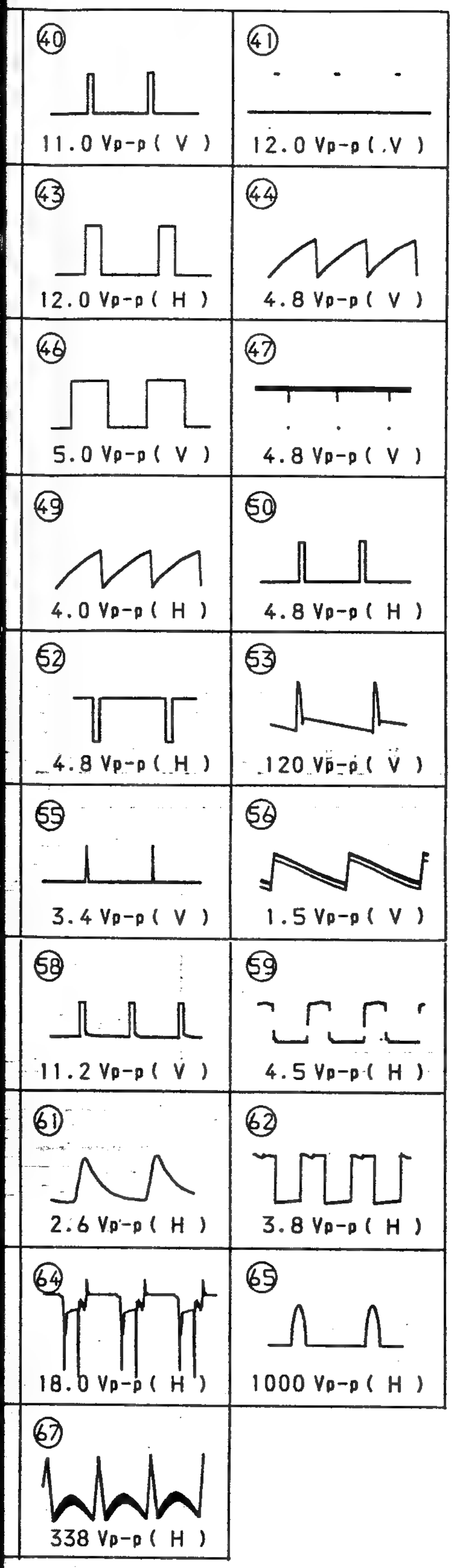

10
11
12
13
14
15
16
17
18
19
DY
H.DY
V.DY
CN501 6P WHT :VH
1 H+
2 H+
3 H-
4 H-
5 V-
6 V+
Q524 2SB601A V CENT OUT2
Q525 2SB709A V-CENT OUT1
Q523 2SB601A V-CENT CONT
Q514 DTC124EKA 50/60 SW
Q515 2SC2690A V.OUT2
Q513 2SA1220A V.OUT1
Q512 2SC2958 V-DRIVE
Q519 DTC144EKA U/S SW2
Q518 DTC144EKA U/S SW1
IC509 LM358DR PIN-COM
Q527 DF V2
Q526 DF V1
Q503 2SD1134-C PIN-OUT
Q508 2SB709A 50/60 SW
Q531 DF V.BLK1
Q532 DF V.BLK2
113.V BLK
CN508 2P WHT :MINI
1 DF-V
2 DF-H
TO FOCUS VR
Q506 2SB601A V.ZOOMING
IC507 uPC1377C DIFRECTION
SYNC SEP
AFC
H-OSC
PROTECTOR
V-OSC
DRIVE
V-BLK
CN502 6P WHT :MINI
TO C BOARD CN702
6 H2
5 H1
4 NC
3 GND
2 180V
1 G2
TO PICTURE TUBE
FOCUS OUT
FV
TO FOCUS VR (M4E/M4U)
TO C BOARD (M2E/M2U) J701 (G4)
T501 FBT
D515 V19E +170V-RECT
D514 V19G +24V-RECT
IC505 XRA17812T +12V-REG
D510 RGP10G +15V-RECT
D533 RGP10G PROTECT
Q501 2SD1878 H-OUT
D506 ERB07-15
T500 HDT
D502 UF5406 PIN DAMPER1
D512 UF5406 PIN DAMPER2
D504 1SS83 PROTECT
D503 MA111 PROTECT
D505 RGP02-17EL-6433 G2 RECT
Q502 2SC2688 H-DRIVE
Q520 2SB2396K 12V REG
D501 DTZ5.6B HV.PROTECT1
D531 DTZ11B 12V REF1
D532 MA157 12V REF2
Q511 2SB601A CURR-LIM1
Q500 2SB709A CURR-LIM2
D537 MA157 PROTECT
IC511 LA6500FA LCC
IC512
IC500 HB07249
Q528 2SA1380
Q529 DTC144EKA
Q530 DTC144EKA
D547 MA111
12V
15V
115V
-15V
CN503 6P WHT :MINI
1 5V A
2 -15V
3 GND
4 115V
5 GND
6 15V
TO G BOARD CN605
CN504 3P YEL :S-MICRO
1 DGC SW
2 GND
3 DIB
TO G BOARD CN606
(12.LCC)
CN509
1 LAND
2 NC
3 LAND RET
A(3/3)
H/V OUT
DEFLECTION SYSTEM
AUDIO OUT
B-SS9542<U/C>-A..P3



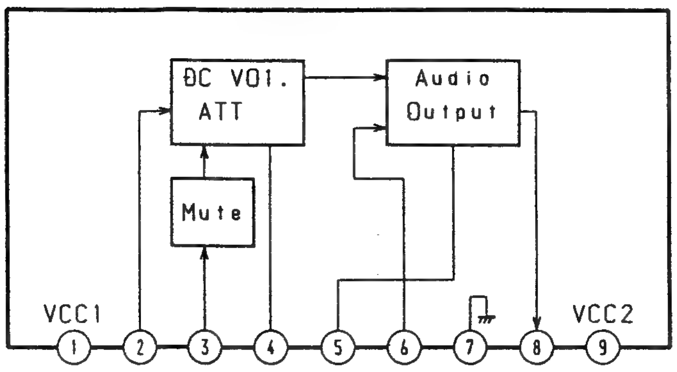
·A BOARD WAVEFORMS



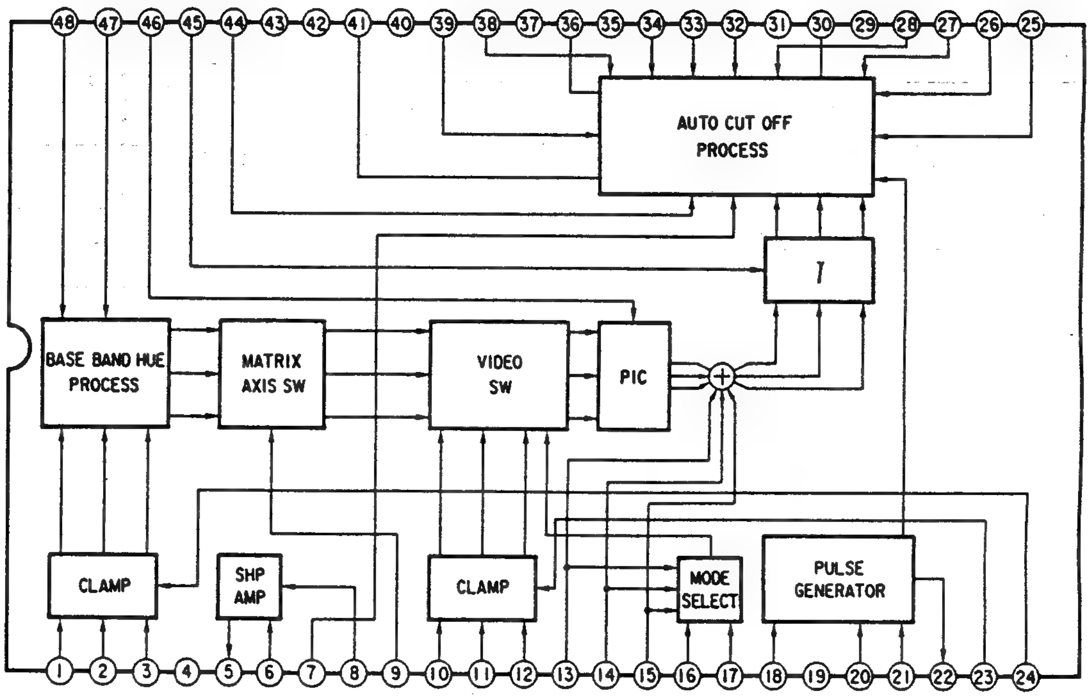
EFORMS



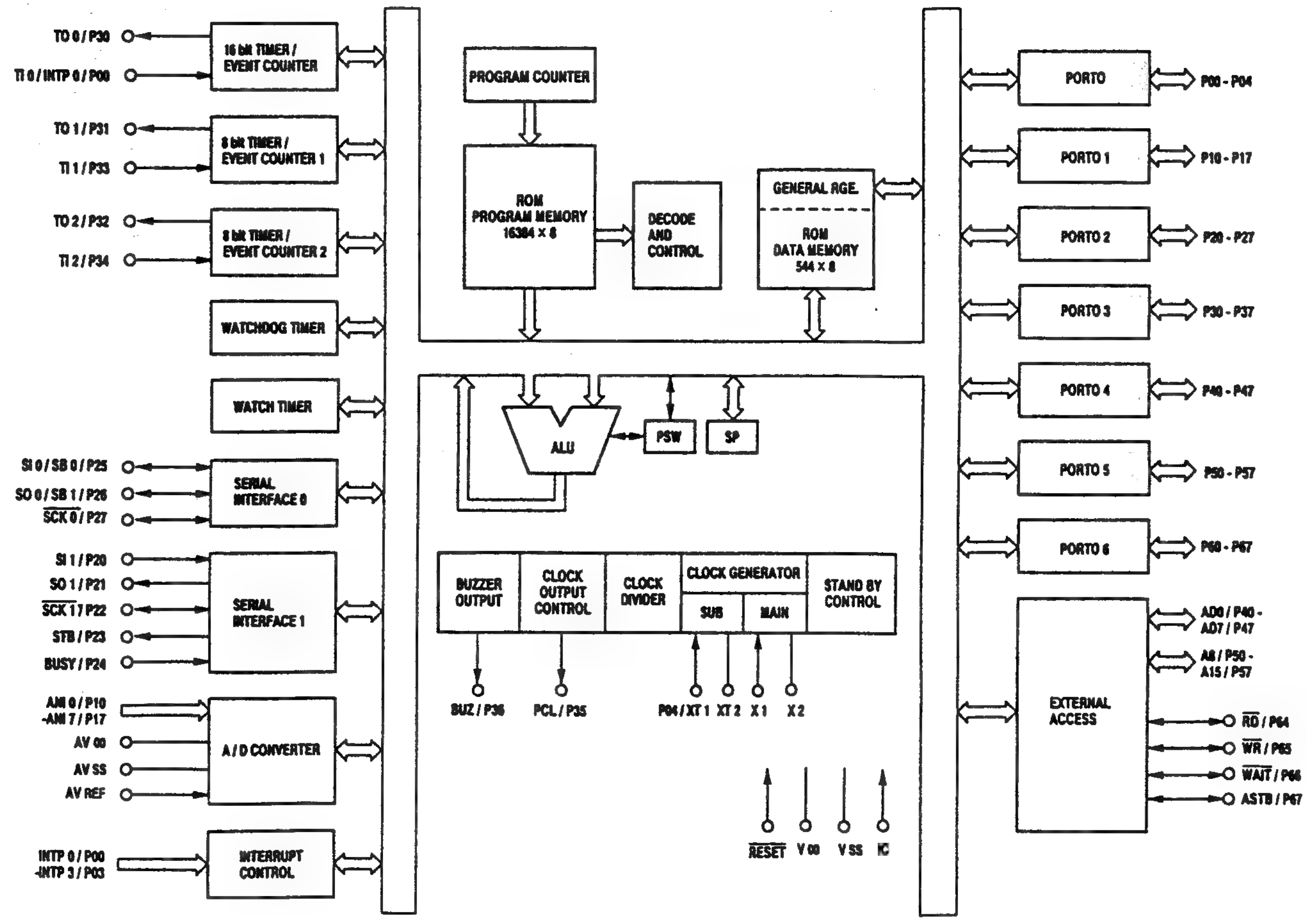
A BOARD IC200 AN5265



A BOARD IC404 CXA1739S



A BOARD IC101 µPD78013YCW



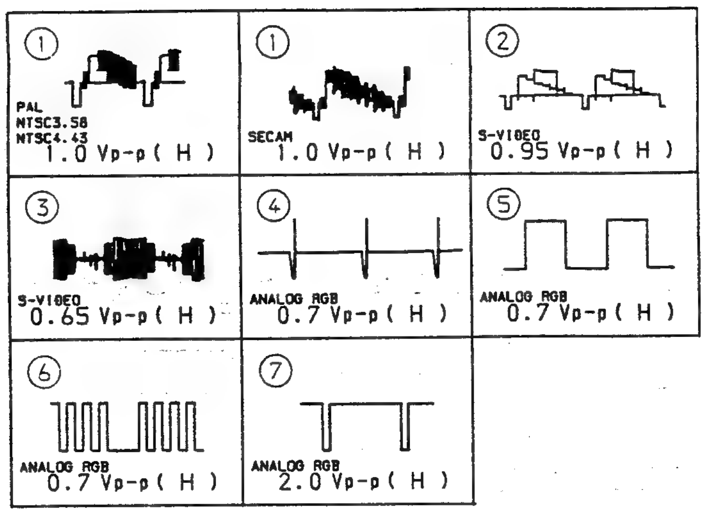
Schematic diagrams
← A(3/3) board

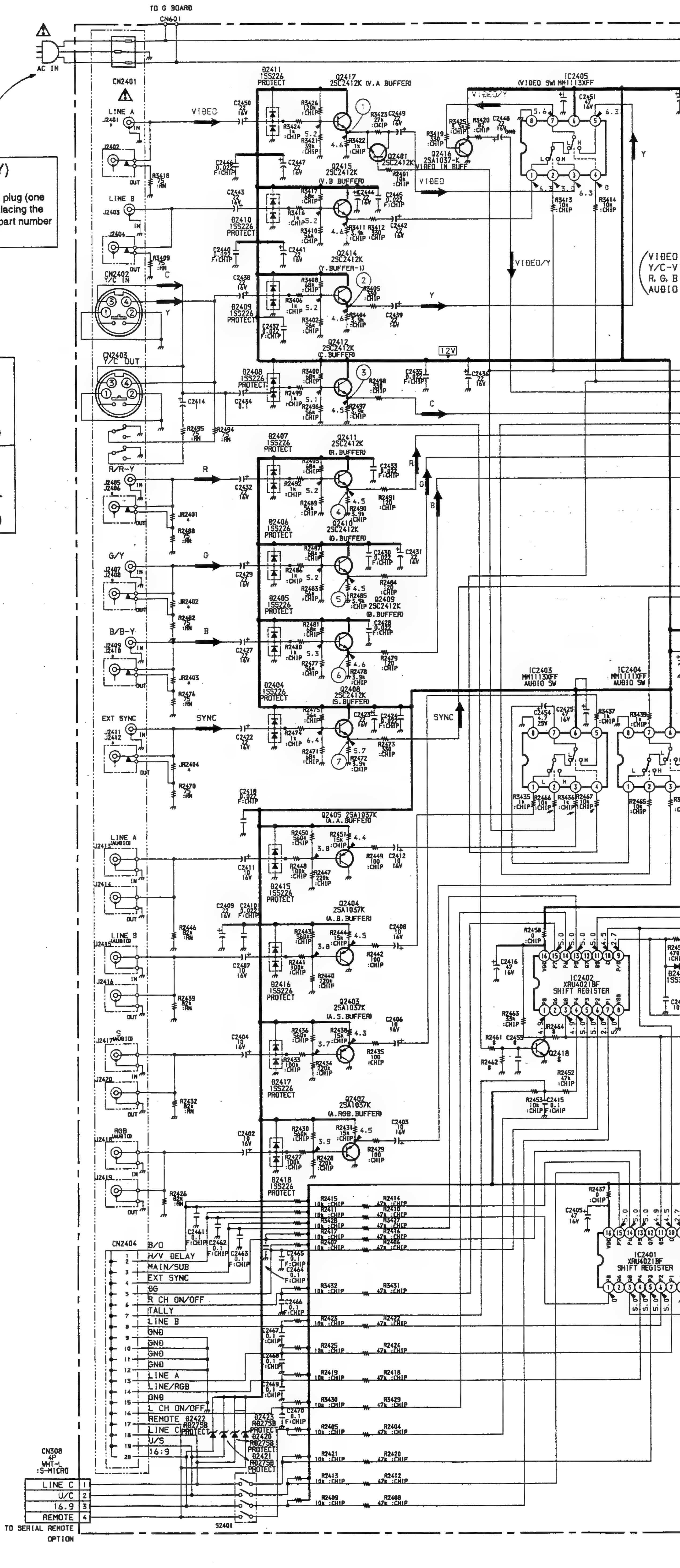
Schematic diagram
G H J
Q X S boards ➡

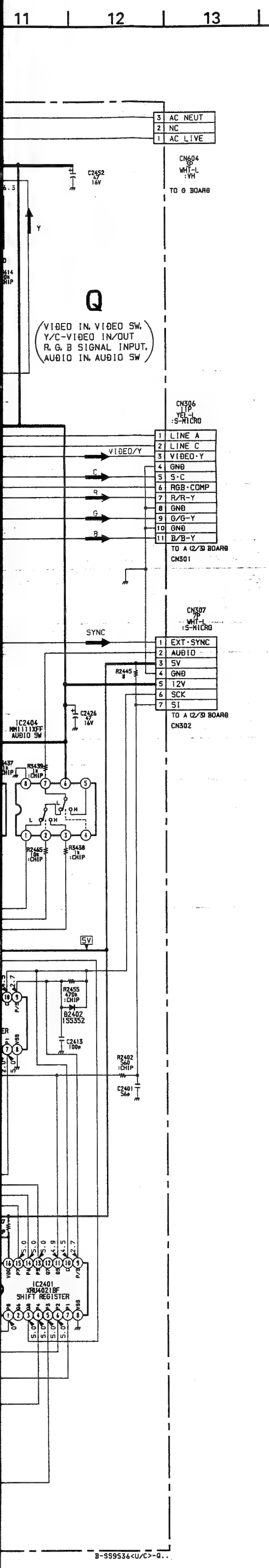
CAUTION (US MODEL ONLY)

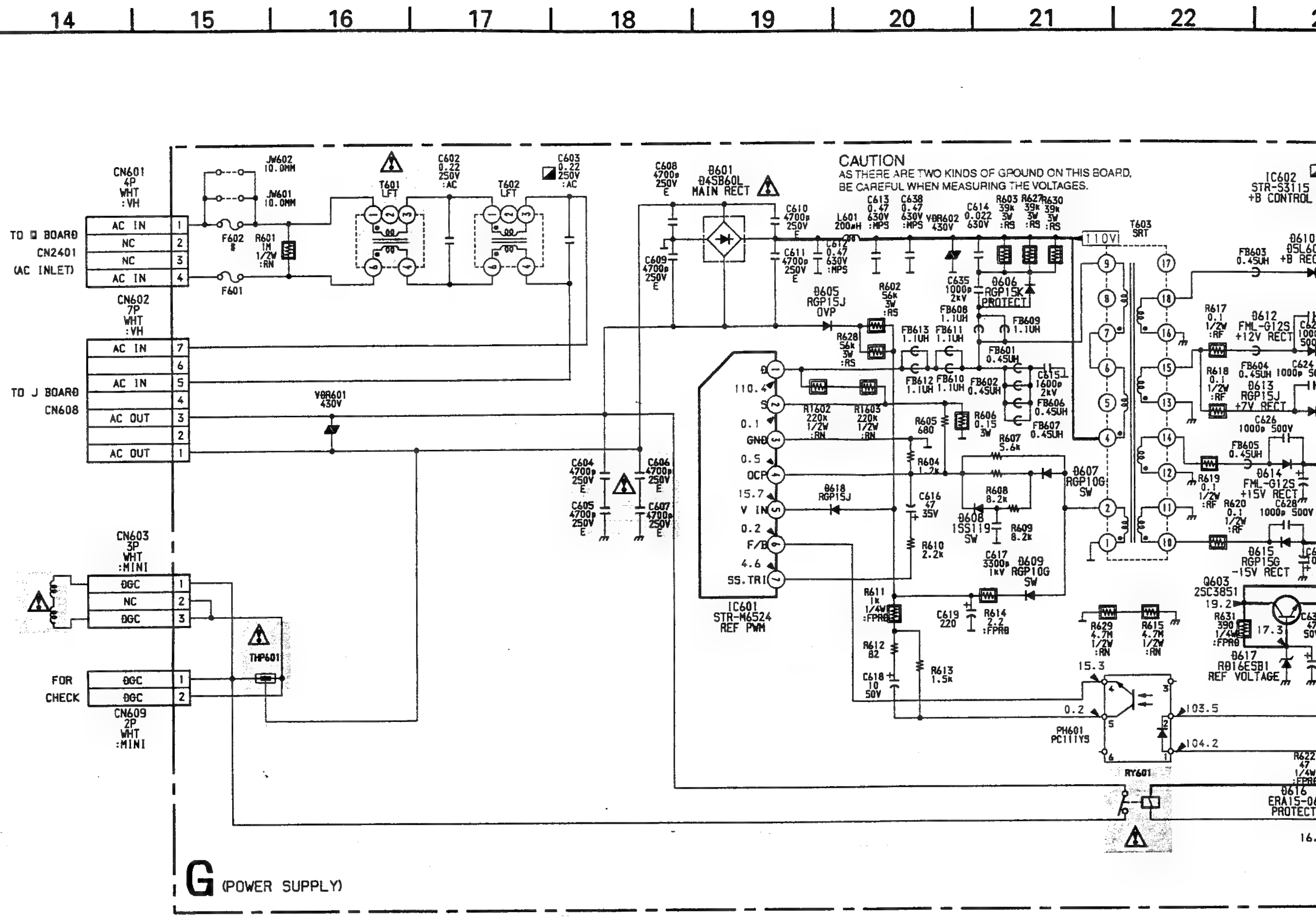
This set is equipped with a polarized ac power cord plug (one blade of the plug is wider than the other). When reqlacing the ac power cord, be sure to connect it with specified part number as shown in this diagram

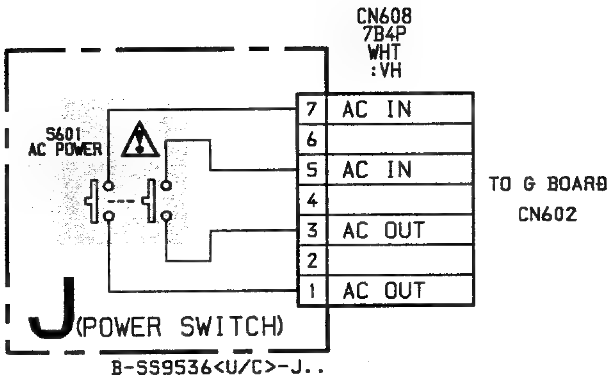
·Q BOARD WAVEFORMS

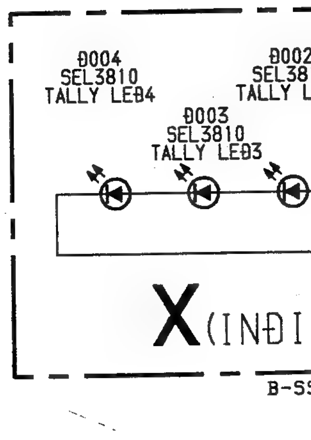




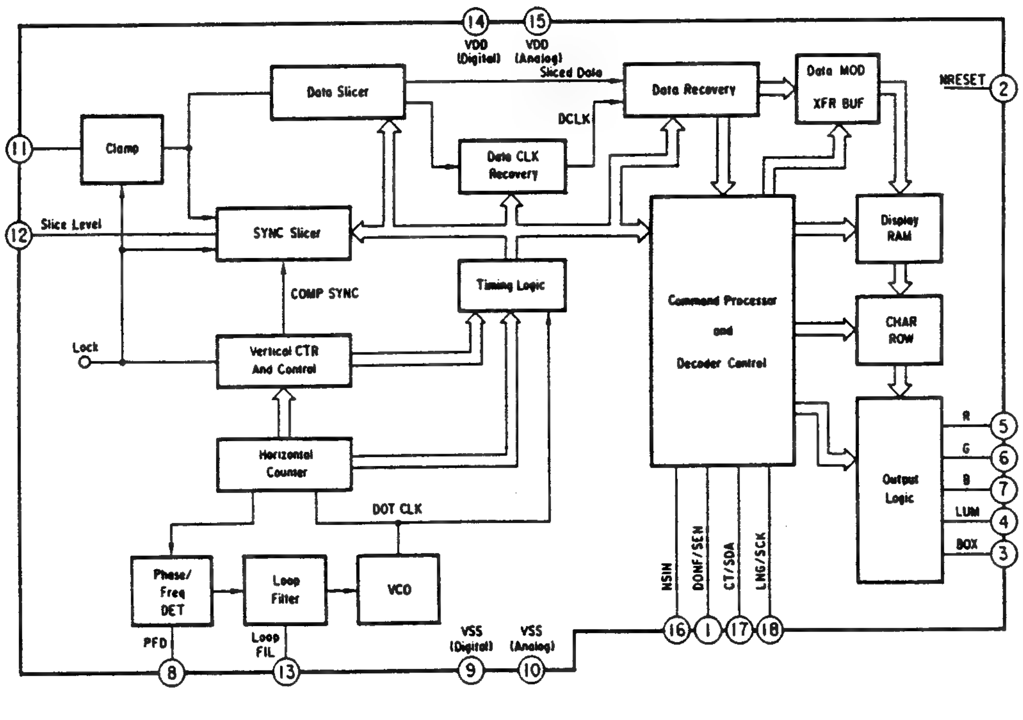


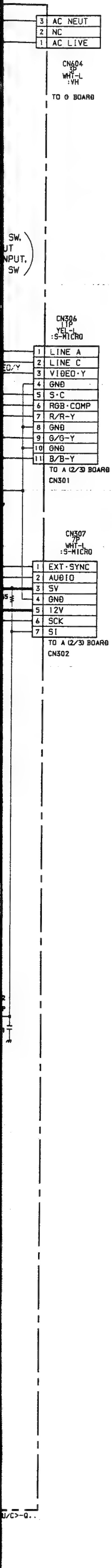


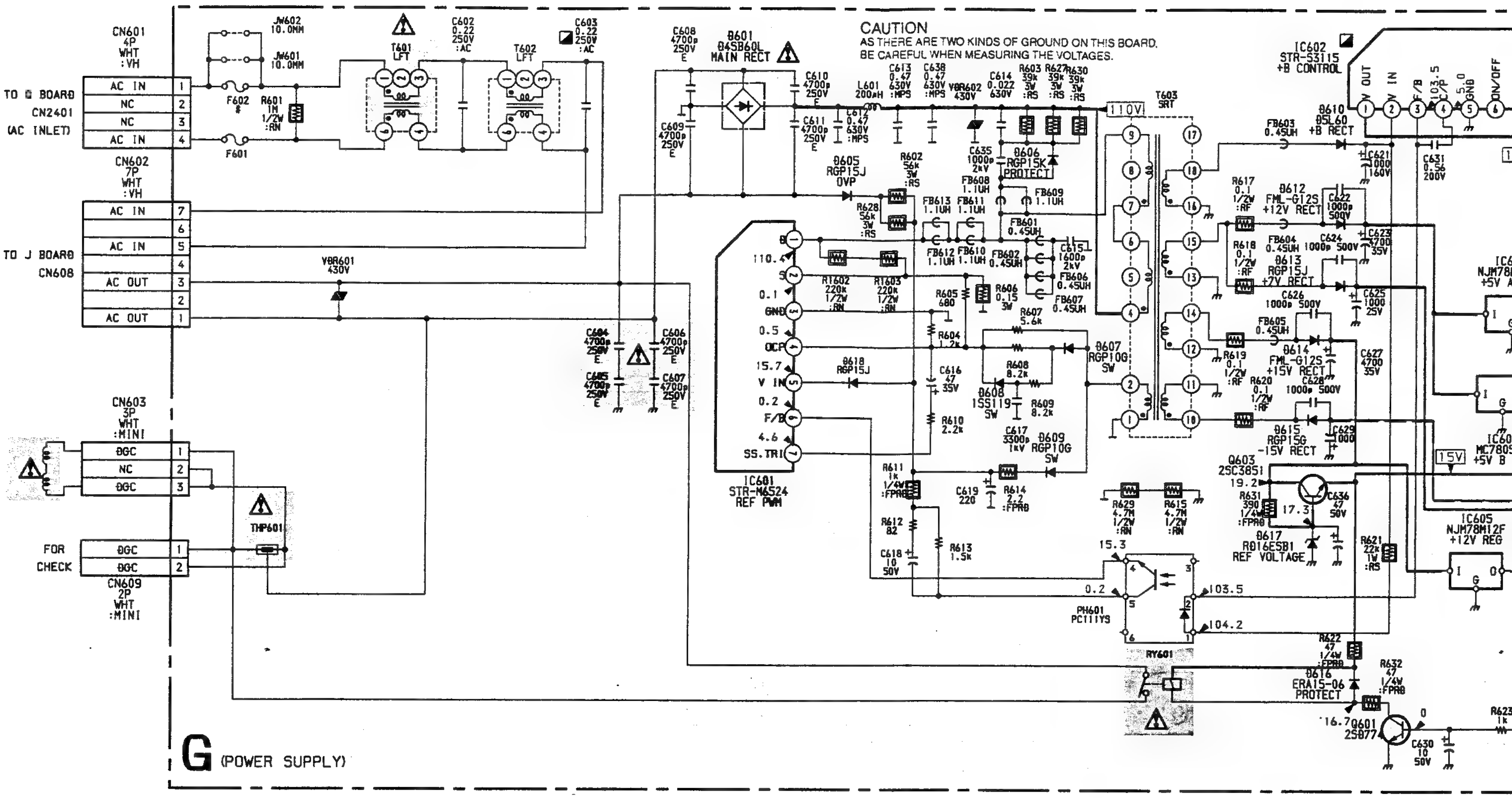


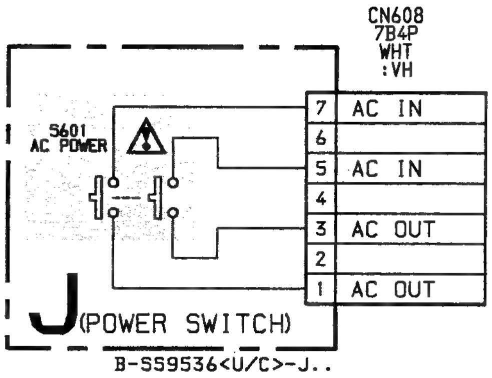


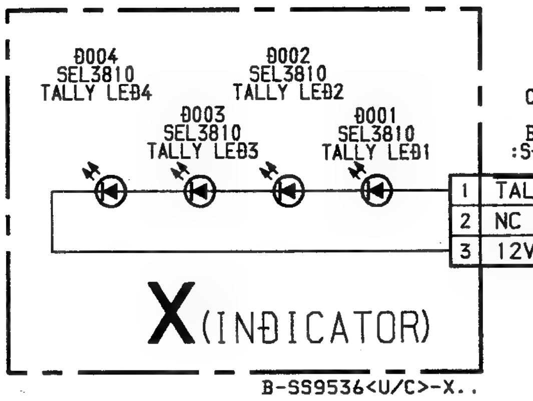
S BOARD IC801 Z8622812PSC



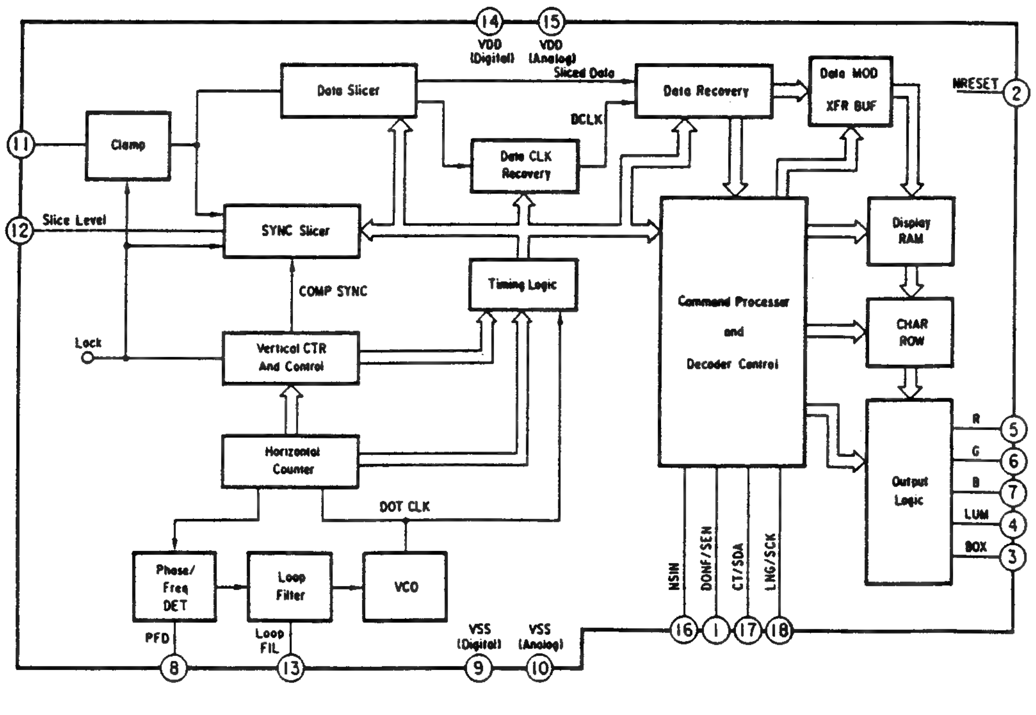


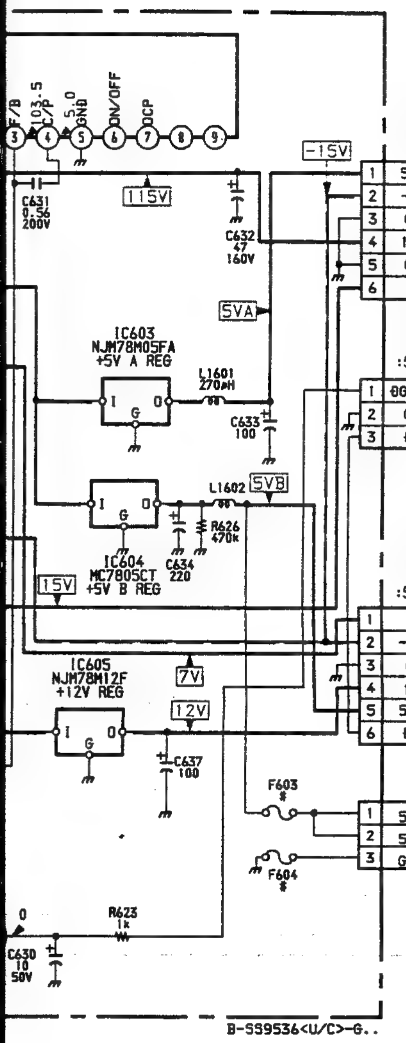




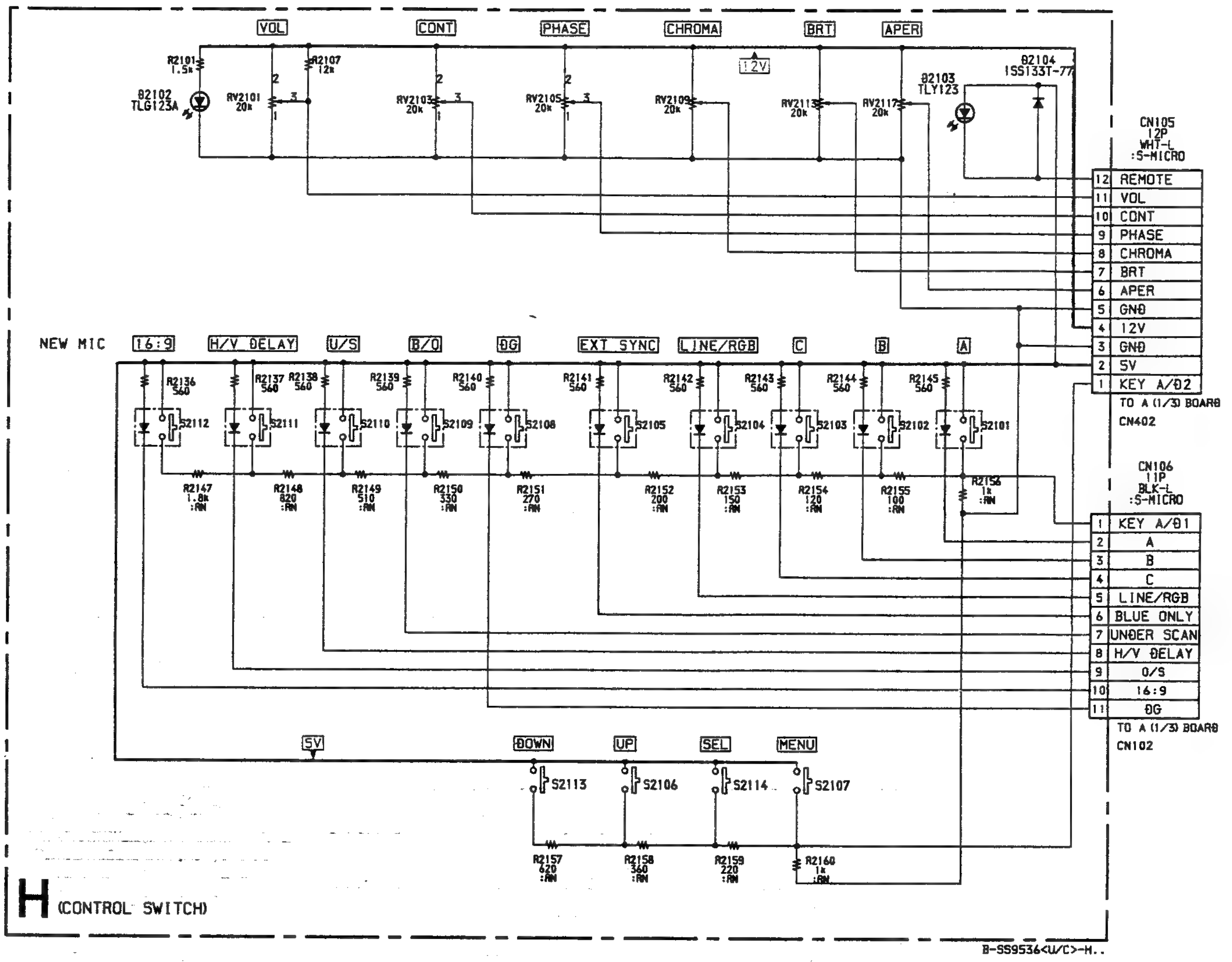


S BOARD IC801 Z8622812PSC

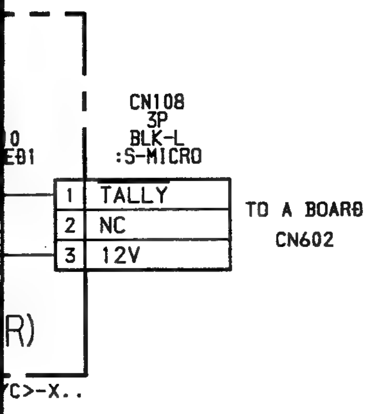




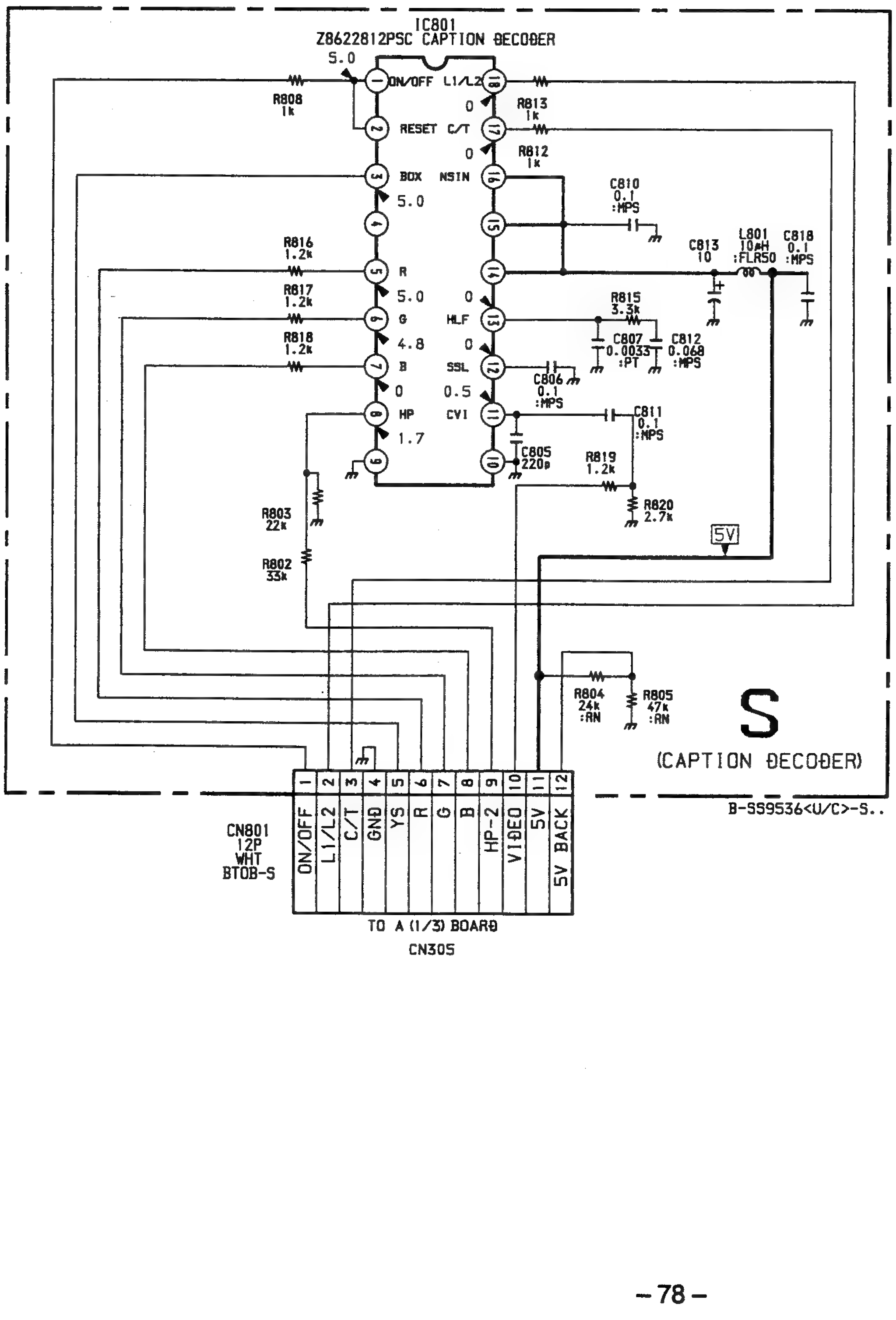
CN605
6P
WHT
:MINI
-15V
115V
5V A
-15V
GND
115V
GND
15V
TO A (3/3) BOARD
CN503
C631
0.56
200V
C632
47
160V
5VA
CN606
3P
WHT
:S-MICRO
IC603
NJM78M05FA
+5V A REG
L1601
270μH
C633
100
DDC SW
GND
D1B
TO A (3/3) BOARD
CN504
L1602
5VB
R626
470k
IC604
MC7805CT
+5V B REG
C634
220
15V
CN607
6P
WHT
:S-MICRO
7V
-15V
GND
12V
5V B
D1B
DIGITAL
OPTION
IC605
NJM78M12F
+12V REG
7V
12V
C637
100
CN604
F603
F604
5V
5V
GND
R623
1k
C630
10
50V
B-SS9536<U/C>-G..



VOL
CONT
PHASE
CHROMA
BRT
APER
12V
R2101
1.5k
R2107
12k
D2102
TLG123A
RV2101
20k
RV2103
20k
RV2105
20k
RV2109
20k
RV2111
20k
RV2117
20k
D2103
TLY123
D2104
1SS133T-77
CN105
12P
WHT-L
:S-MICRO
REMOTE
VOL
CONT
PHASE
CHROMA
BRT
APER
GND
12V
GND
5V
KEY A/D2
TO A (1/3) BOARD
CN402
NEW MIC
16:9
H/V DELAY
U/S
B/O
DG
EXT SYNC
LINE/RGB
C
B
A
R2136 560
R2137 560
R2138 560
R2139 560
R2140 560
R2141 560
R2142 560
R2143 560
R2144 560
R2145 560
S2112
S2111
S2110
S2109
S2108
S2105
S2104
S2103
S2102
S2101
R2147 1.8k :RN
R2148 820 :RN
R2149 510 :RN
R2150 330 :RN
R2151 270 :RN
R2152 200 :RN
R2153 150 :RN
R2154 120 :RN
R2155 100 :RN
R2156 1k :RN
CN106
11P
BLK-L
:S-MICRO
KEY A/D1
A
B
C
LINE/RGB
BLUE ONLY
UNDER SCAN
H/V DELAY
O/S
16:9
DG
TO A (1/3) BOARD
CN102
5V
DOWN
UP
SEL
MENU
S2113
S2106
S2114
S2107
R2157 620 :RN
R2158 360 :RN
R2159 220 :RN
R2160 1k :RN
H (CONTROL SWITCH)
B-SS9536<U/C>-H..



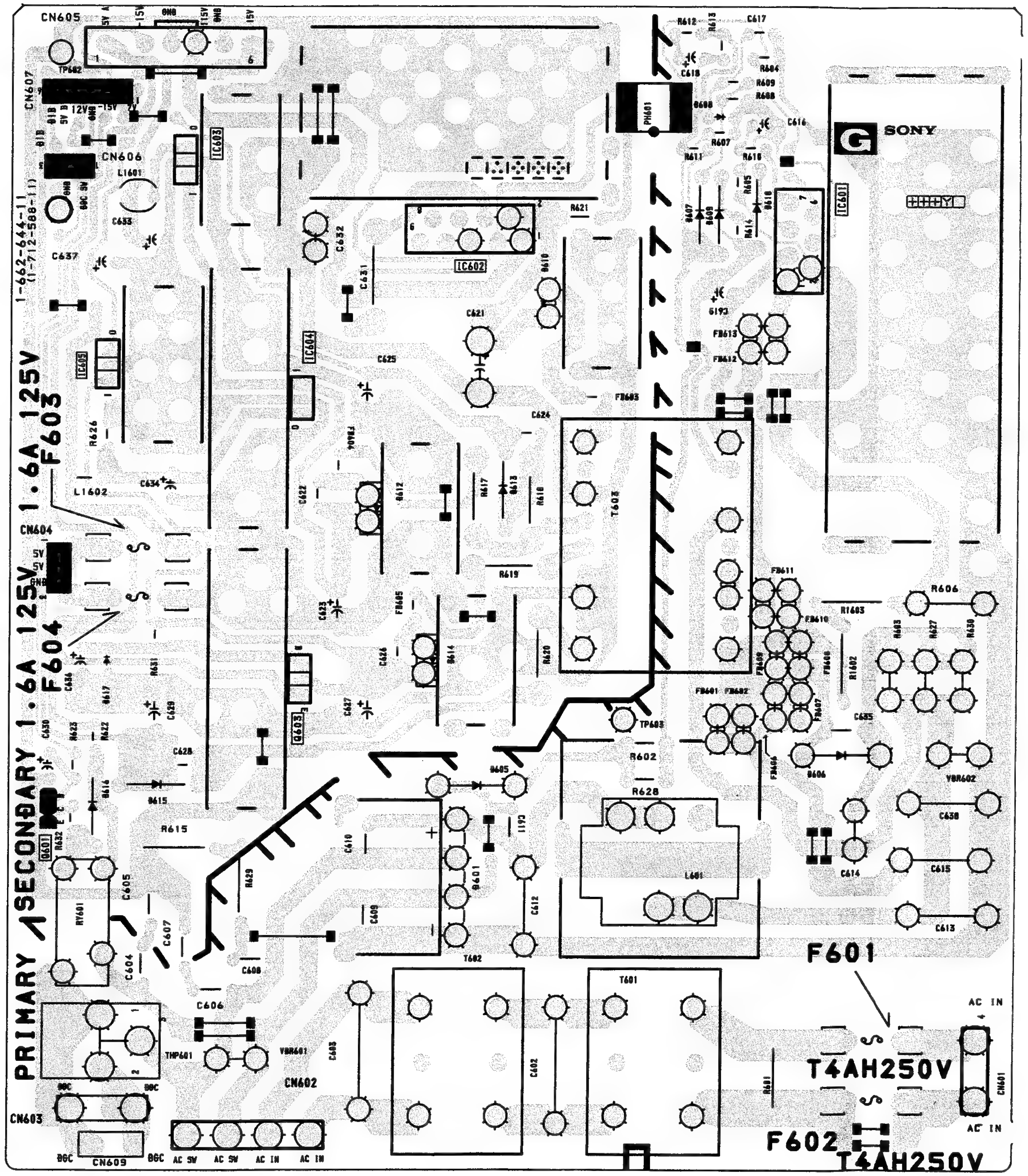
CN108
3P
BLK-L
:S-MICRO
TALLY
NC
12V
TO A BOARD
CN602
R)
/C>-X..



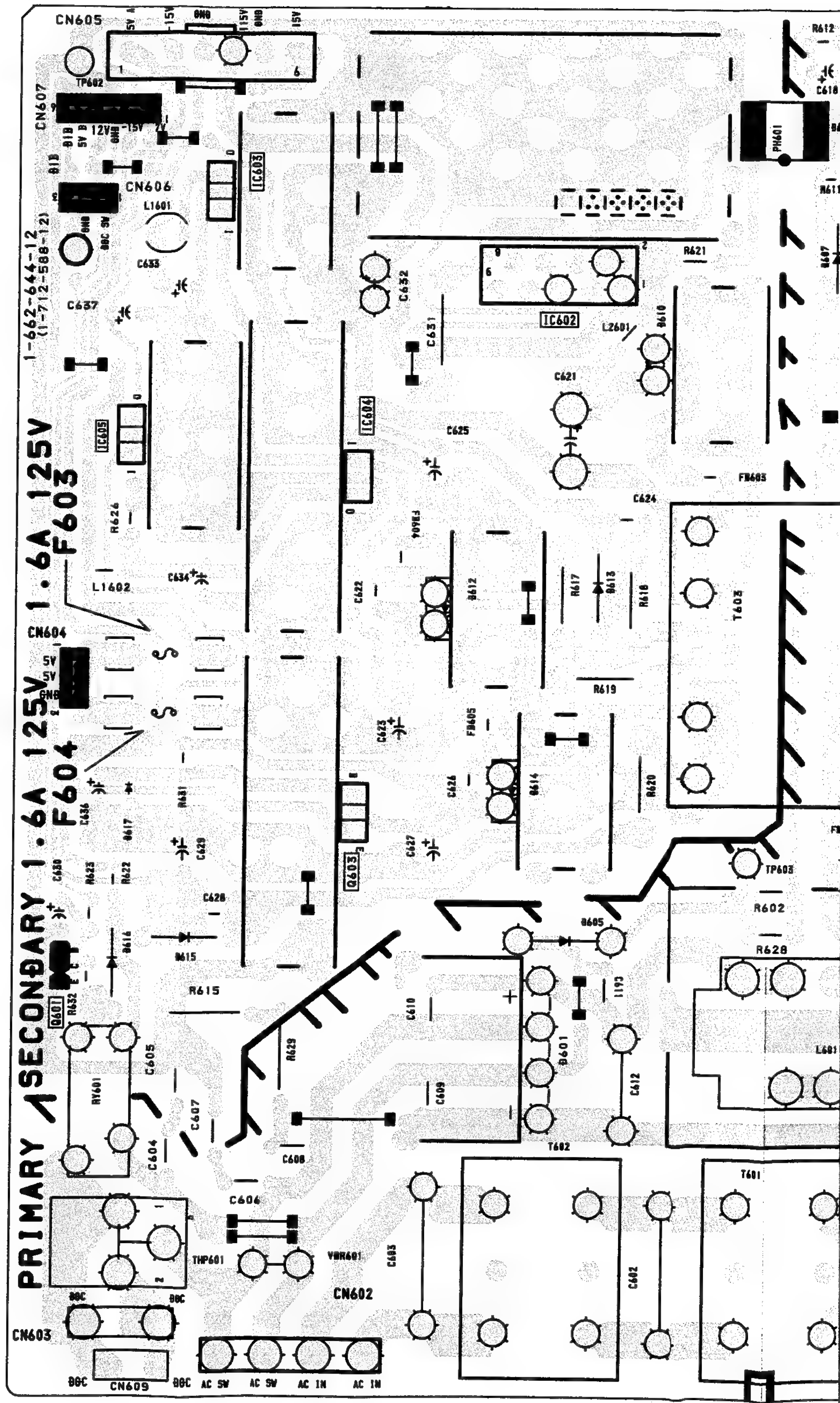
IC801
Z8622812PSC CAPTION DECODER
ON/OFF
L1/L2
RESET
C/T
BOX
NSIN
R
G
B
HP
HLF
SSL
CVI
5.0
0.5
4.8
1.7
R808
1k
R813
1k
R812
1k
C810
0.1
:MPS
C813
10
L801
10μH
:FLR50
C818
0.1
:MPS
R816
1.2k
R817
1.2k
R818
1.2k
R815
3.3k
C807
0.0033
:PT
C812
0.068
:MPS
C806
0.1
:MPS
C811
0.1
:MPS
C805
220p
R819
1.2k
R820
2.7k
R803
22k
R802
33k
5V
R804
24k
:RN
R805
47k
:RN
S
(CAPTION DECODER)
B-SS9536<U/C>-S..
CN801
12P
WHT
BTOB-S
ON/OFF
L1/L2
C/T
GND
YS
R
G
B
HP-2
VIDEO
5V
5V BACK
TO A (1/3) BOARD
CN305

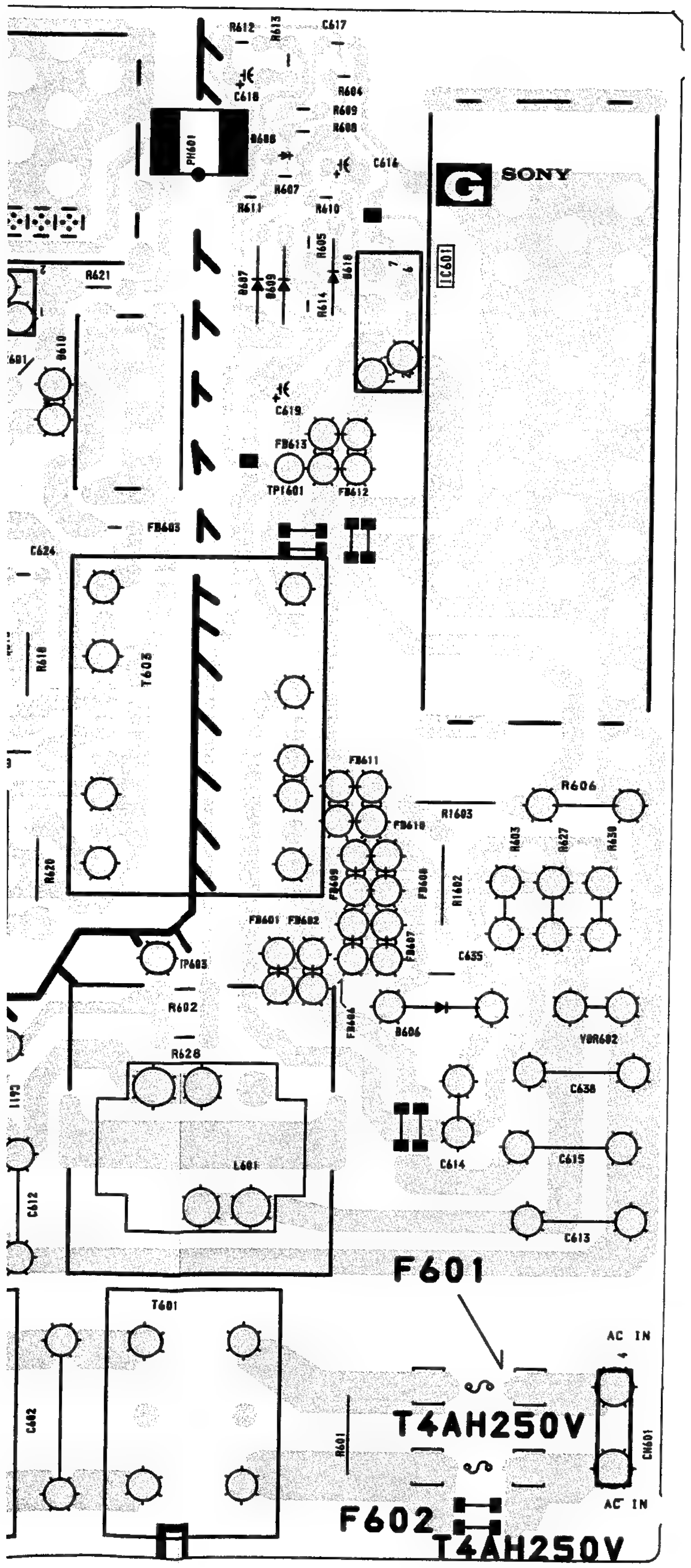
G [POWER SUPPLY]

–G BOARD–



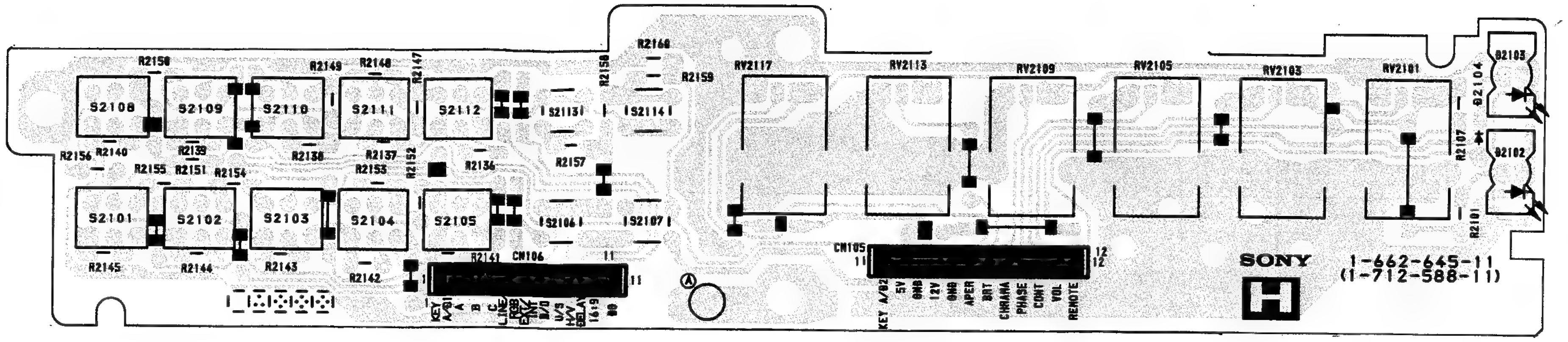
–G BOARD–



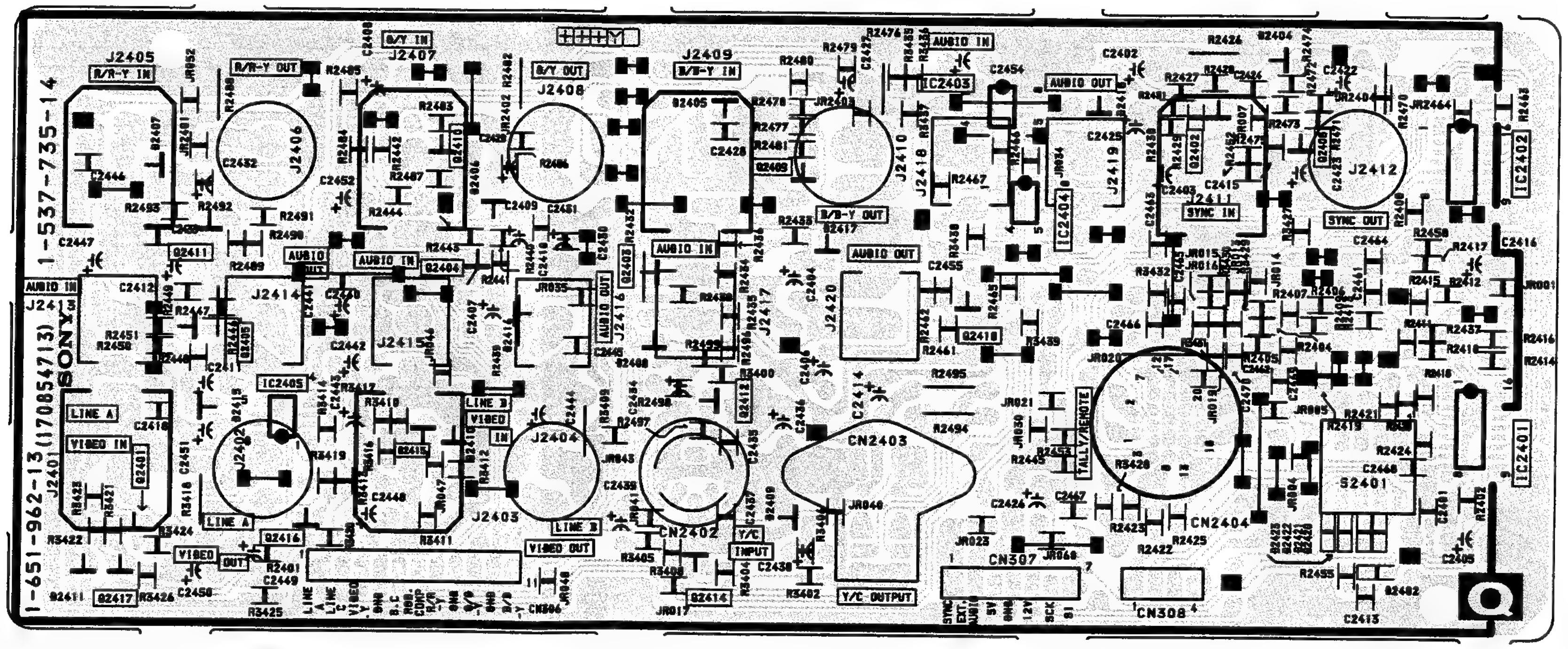


H [CONTROL SWITCH] **Q** [VIDEO IN, VIDEO SW, Y/C-VIDEO IN/OUT, R.G.B SIGNAL INPUT, AUDIO IN, AUDIO SW] **J** [POWER SWITCH] **S** [CAPTION DECODER] **X** [INDICATOR]

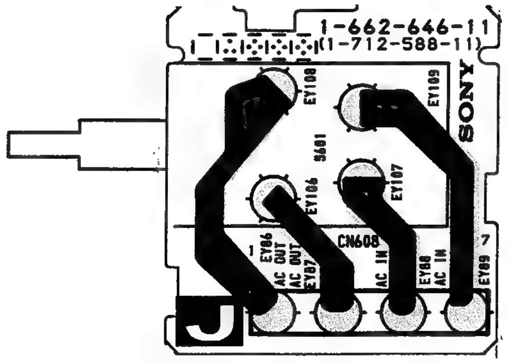
–H BOARD–



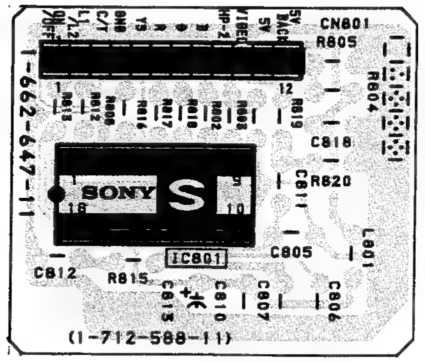
–Q BOARD–



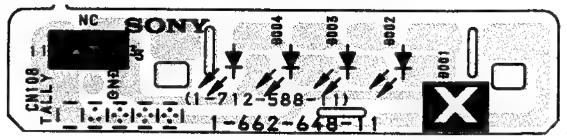
–J BOARD–



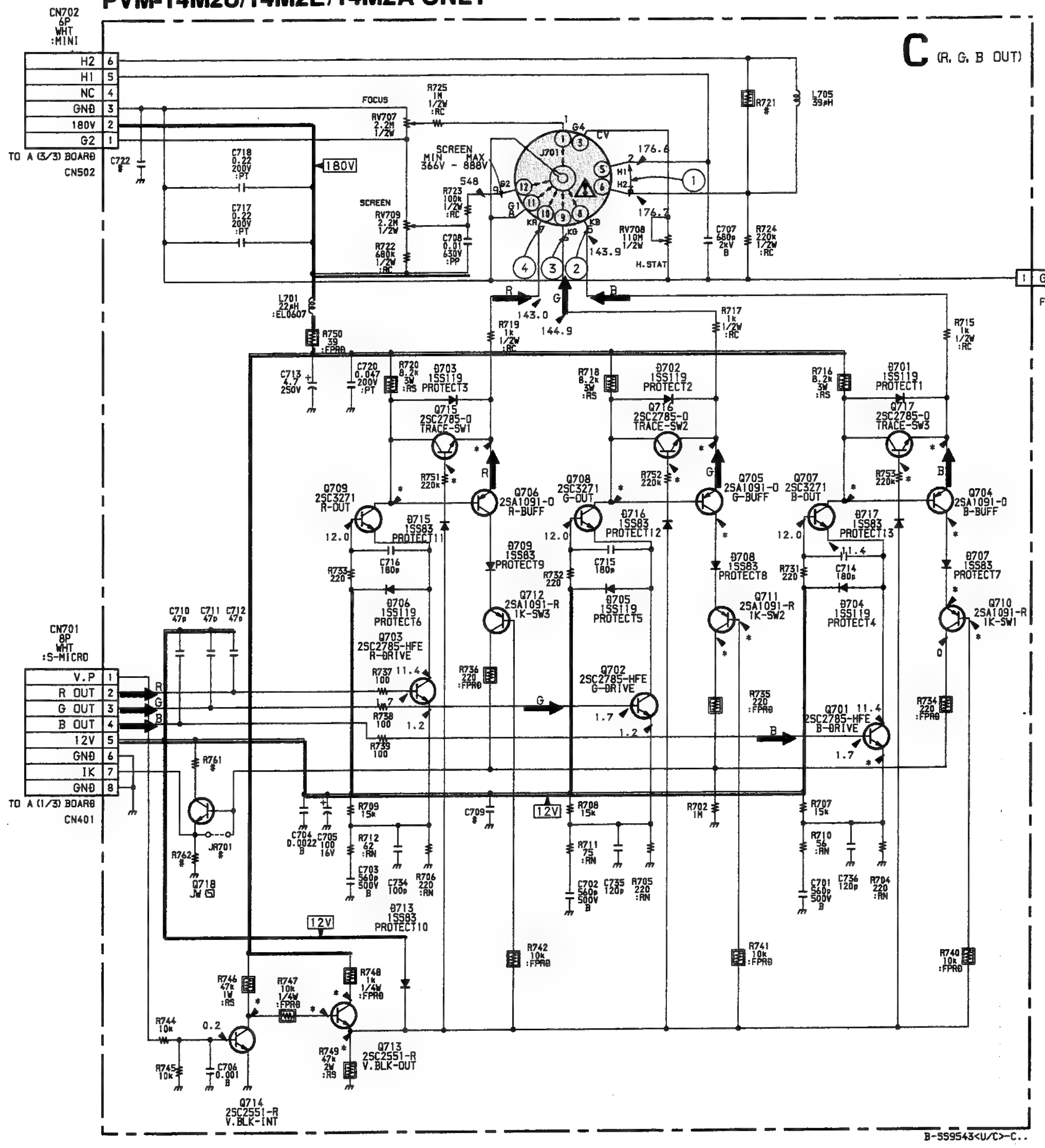
–S BOARD–
PVM-14M2U/14M4U ONLY

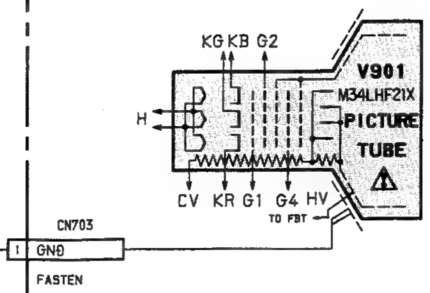


–X BOARD–



PVM-14M2U/14M2E/14M2A ONLY



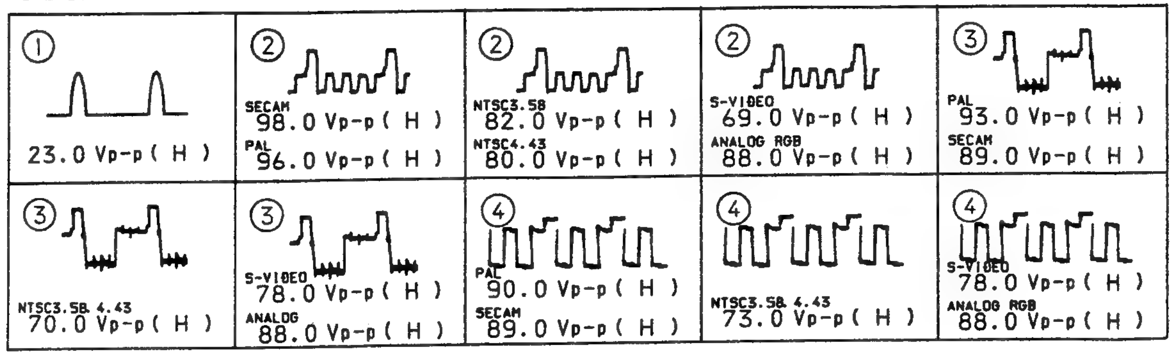


C BOARD ＊ MARK LIST

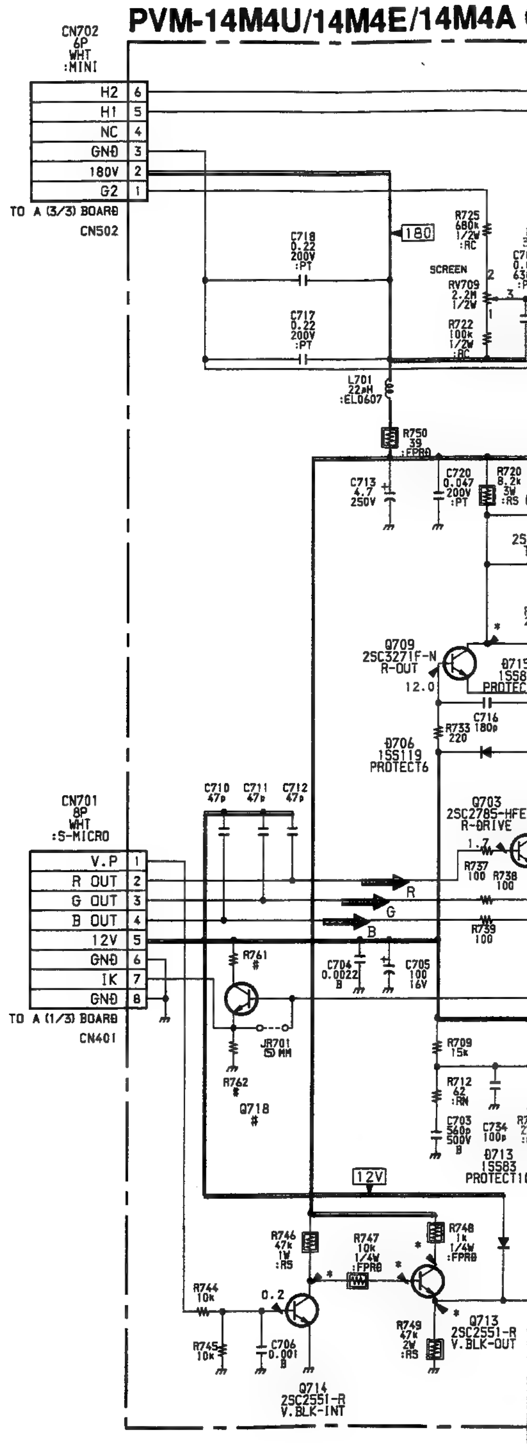
	PAL	SECAM	NTSC 3.58	NTSC 4.43	S-VIDEO	ANALOG RGB
Q701 B	2.0	1.9	1.73	1.8	1.8	2.0
E	1.4	1.3	1.1	1.1	1.2	1.4
Q702 B	2.0	1.9	1.7	1.7	1.8	2.0
E	1.5	1.3	1.1	1.1	1.2	1.4
Q703 B	1.9	1.8	1.6	1.6	1.8	1.9
E	1.3	1.2	1.0	1.0	1.2	1.3
Q704 B	143.6	148.0	153.9	153.4	144.9	143.8
C	129.0	134.3	135.4	134.5	31.2	111.5
E	139.7	144.4	150.3	149.6	140.4	140.1
Q705 B	141.7	145.8	154.9	154.2	145.0	141.8
C	124.9	130.2	132.3	130.4	60.4	106.6
E	138.3	142.3	151.3	150.6	140.7	138.5
Q706 B	149.7	151.5	160.4	159.8	144.9	148.6
C	134.5	138.3	141.2	141.1	103.2	114.7
E	146.2	148.0	157.1	156.4	140.8	145.0
Q707 C	143.8	148.0	154.0	153.4	144.9	143.7
Q708 C	141.9	145.9	155.2	154.3	145.0	141.8
Q709 C	149.8	151.5	160.6	159.9	144.9	148.5
Q710 B	172.8	173.1	174.3	173.9	167.0	173.5
E	160.9	164.0	162.9	162.2	154.0	161.2
Q711 B	172.8	173.2	174.3	173.9	167.0	173.5
C	160.6	161.0	162.3	161.8	154.1	161.3
Q712 B	172.9	173.2	174.0	174.2	167.0	173.5
E	161.6	163.6	164.1	164.8	154.5	161.4
Q713 B	172.8	173.2	173.9	173.9	166.8	173.5
C	184.2	184.5	184.7	184.6	176.6	183.8
E	173.3	173.6	174.3	174.3	167.2	173.9
Q714 C	173.6	173.7	174.5	174.4	167.4	174.1
Q715 B	146.7	148.6	157.6	157.0	140.3	145.7
C	149.5	151.5	160.6	159.9	144.9	148.5
E	146.1	148.0	157.2	156.5	140.7	145.0
Q716 B	139.2	143.3	152.5	151.5	140.7	139.4
C	141.7	145.8	155.2	154.2	145.1	141.8
E	138.2	142.3	151.4	150.5	140.6	138.4
Q717 B	140.9	145.4	151.7	150.8	140.6	141.2
C	143.6	148.0	154.1	153.4	144.9	143.8
E	139.8	144.4	150.5	149.6	140.4	140.0

D701	PROTECT 1
D702	PROTECT 2
D703	PROTECT 3
D704	PROTECT 4
D705	PROTECT 5
D706	PROTECT 6
D707	PROTECT 7
D708	PROTECT 8
D709	PROTECT 9
D713	PROTECT 10
D715	PROTECT 11
D716	PROTECT 12
D717	PROTECT 13
Q701	B DRIVE
Q702	G DRIVE
Q703	R DRIVE
Q704	B BUFF
Q705	G BUFF
Q706	R BUFF
Q707	B OUT
Q708	G OUT
Q709	R OUT
Q710	IK SW 1
Q711	IK SW 2
Q712	IK SW 3
Q713	V. BLK OUT
Q714	V. BLK INT
Q715	TRACE SW 1
Q716	TRACE SW 2
Q717	TRACE SW 3

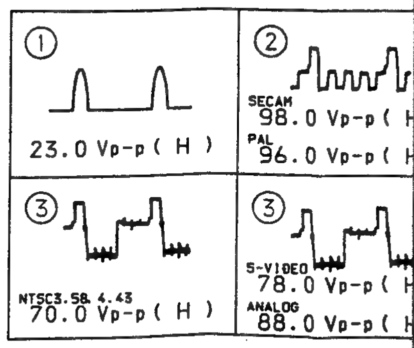
·C BOARD WAVEFORMS



PVM-14M4U/14M4E/14M4A



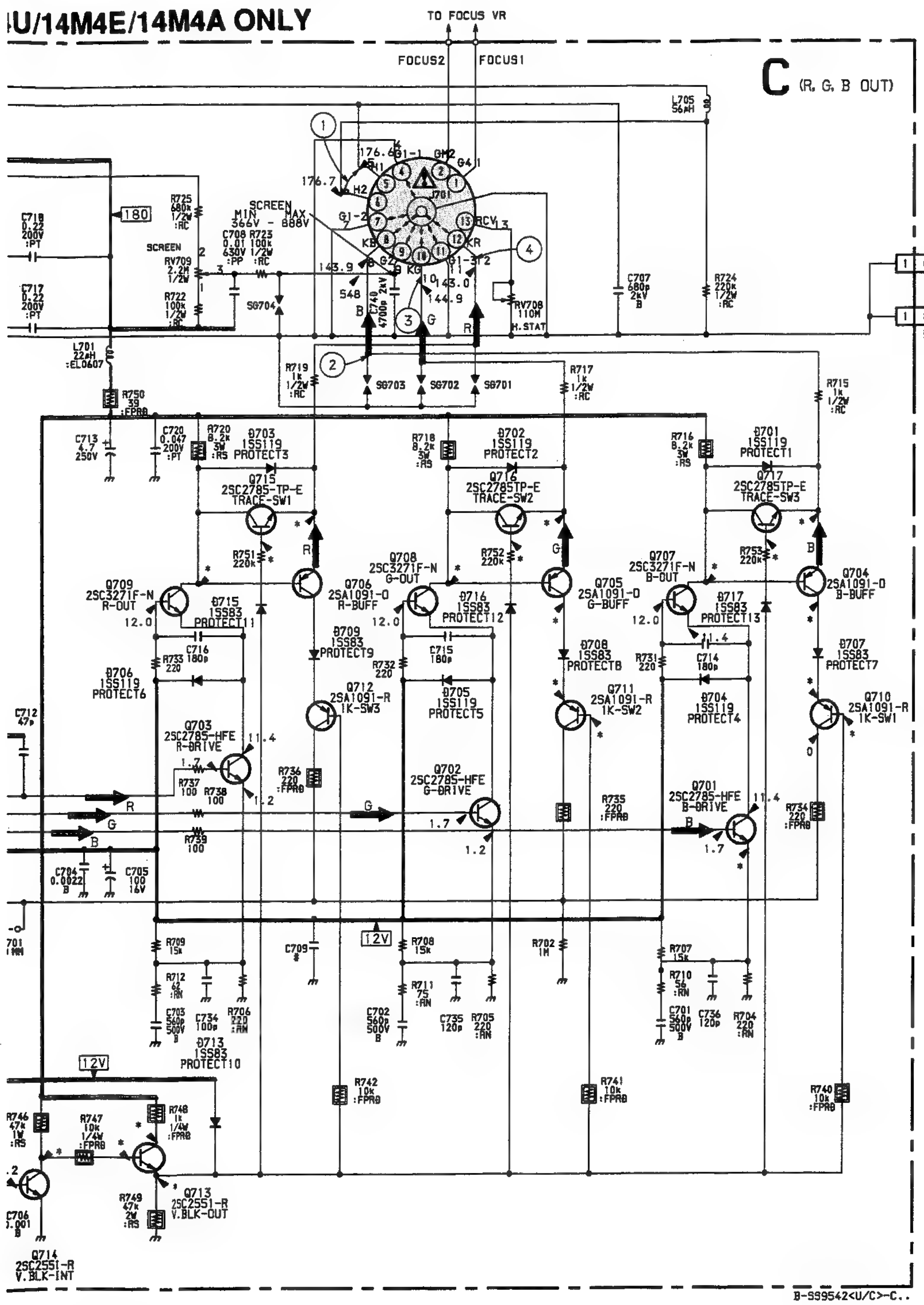
·C BOARD WAVEFORMS



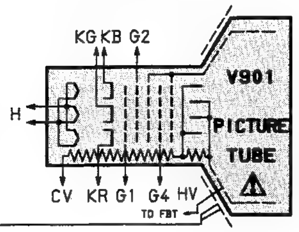
Schematic diagram

C board ➡

U/14M4E/14M4A ONLY



PVM-14M4U:M34LHF20X
PVM-14M4E/14M4A:M34LHF21X

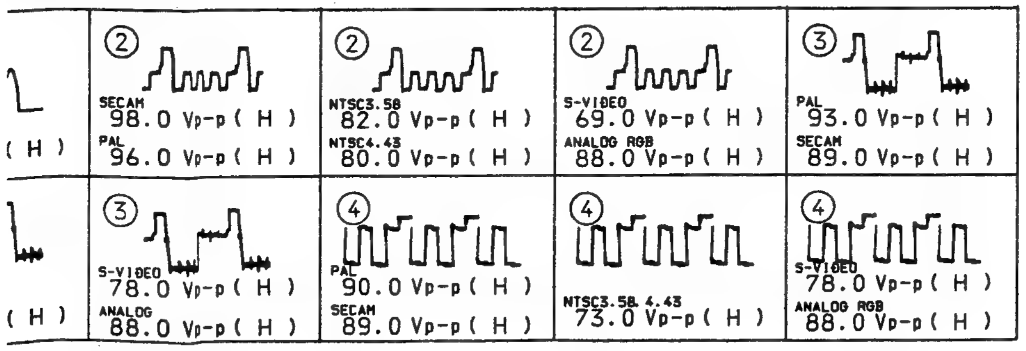


C BOARD ＊ MARK LIST

	PAL	SECAM	NTSC 3.58	NTSC 4.43	S-VIDEO	ANALOG RGB
Q701 B	2.0	1.9	1.73	1.8	1.8	2.0
E	1.4	1.3	1.1	1.1	1.2	1.4
Q702 B	2.0	1.9	1.7	1.7	1.8	2.0
E	1.5	1.3	1.1	1.1	1.2	1.4
Q703 B	1.9	1.8	1.6	1.6	1.8	1.9
E	1.3	1.2	1.0	1.0	1.2	1.3
Q704 B	143.6	148.0	153.9	153.4	144.9	143.8
C	129.0	134.3	135.4	134.5	31.2	111.5
E	139.7	144.4	150.3	149.6	140.4	140.1
Q705 B	141.7	145.8	154.9	154.2	145.0	141.8
C	124.9	130.2	132.3	130.4	60.4	106.6
E	138.3	142.3	151.3	150.6	140.7	138.5
Q706 B	149.7	151.5	160.4	159.8	144.9	148.6
C	134.5	138.3	141.2	141.1	103.2	114.7
E	146.2	148.0	157.1	156.4	140.8	145.0
Q707 C	143.8	148.0	154.0	153.4	144.9	143.7
Q708 C	141.9	145.9	155.2	154.3	145.0	141.8
Q709 C	149.8	151.5	160.6	159.9	144.9	148.5
Q710 B	172.8	173.1	174.3	173.9	167.0	173.5
E	160.9	164.0	162.9	162.2	154.0	161.2
Q711 B	172.8	173.2	174.3	173.9	167.0	173.5
C	160.6	161.0	162.3	161.8	154.1	161.3
Q712 B	172.9	173.2	174.0	174.2	167.0	173.5
E	161.6	163.6	164.1	164.8	154.5	161.4
Q713 B	172.8	173.2	173.9	173.9	166.8	173.5
C	184.2	184.5	184.7	184.6	176.6	183.8
E	173.3	173.6	174.3	174.3	167.2	173.9
Q714 C	173.6	173.7	174.5	174.4	167.4	174.1
Q715 B	146.7	148.6	157.6	157.0	140.3	145.7
C	149.5	151.5	160.6	159.9	144.9	148.5
E	146.1	148.0	157.2	156.5	140.7	145.0
Q716 B	139.2	143.3	152.5	151.5	140.7	139.4
C	141.7	145.8	155.2	154.2	145.1	141.8
E	138.2	142.3	151.4	150.5	140.6	138.4
Q717 B	140.9	145.4	151.7	150.8	140.6	141.2
C	143.6	148.0	154.1	153.4	144.9	143.8
E	139.8	144.4	150.5	149.6	140.4	140.0

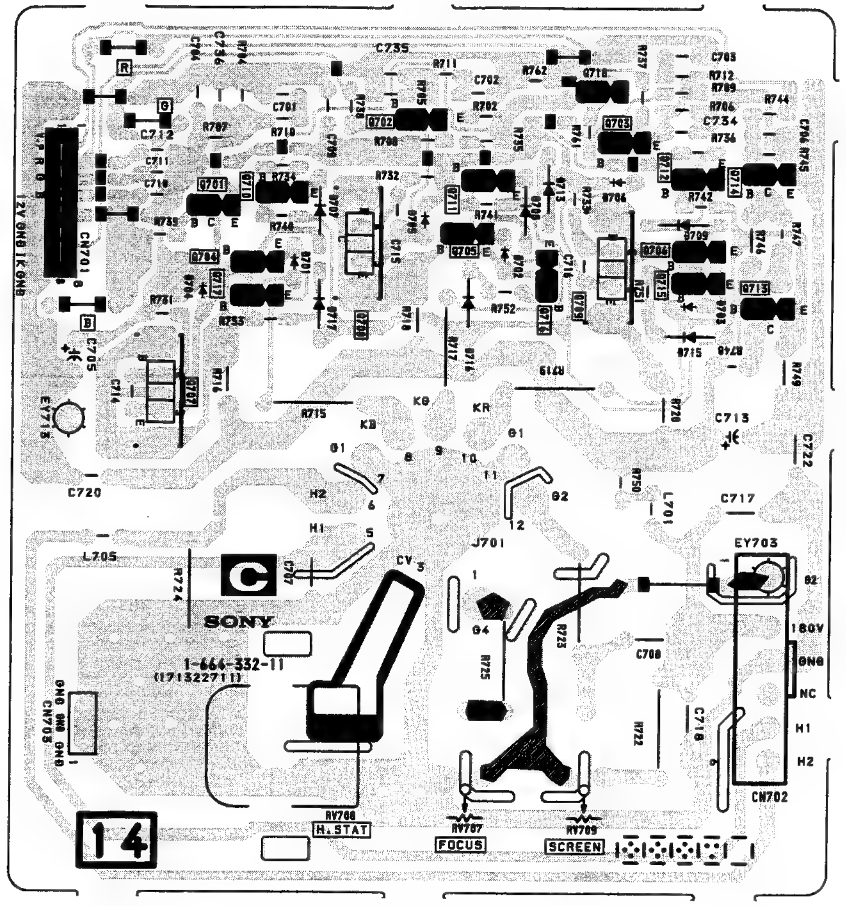
D701	PROTECT 1
D702	PROTECT 2
D703	PROTECT 3
D704	PROTECT 4
D705	PROTECT 5
D706	PROTECT 6
D707	PROTECT 7
D708	PROTECT 8
D709	PROTECT 9
D713	PROTECT 10
D715	PROTECT 11
D716	PROTECT 12
D717	PROTECT 13
Q701	B DRIVE
Q702	G DRIVE
Q703	R DRIVE
Q704	B BUFF
Q705	G BUFF
Q706	R BUFF
Q707	B OUT
Q708	G OUT
Q709	R OUT
Q710	IK SW 1
Q711	IK SW 2
Q712	IK SW 3
Q713	V. BLK OUT
Q714	V. BLK INT
Q715	TRACE SW 1
Q716	TRACE SW 2
Q717	TRACE SW 3

WAVEFORMS



C [R.G.B OUT]

–C BOARD– PVM-14M2U/14M2E/14M2A ONLY



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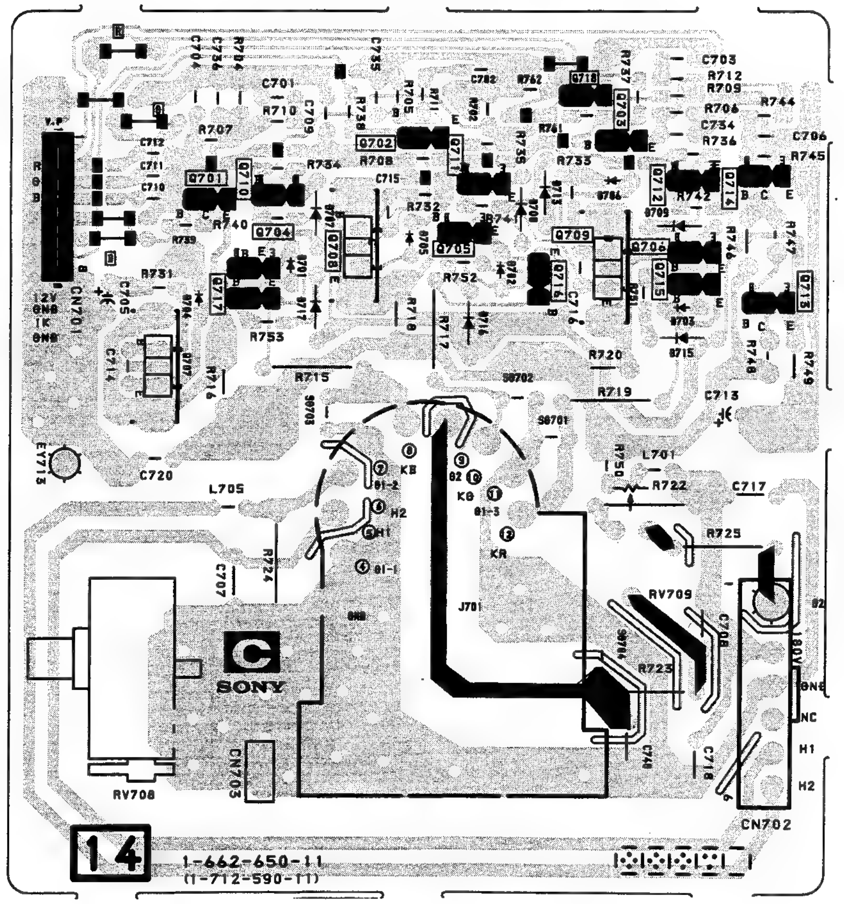
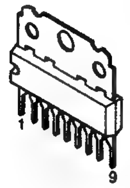


6-5. SEMICONDUCTORS

AN5265



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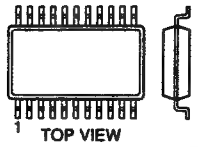
MC14066BF
MC14584BF
MC74HC86F



14pin SOP

BA7655AF-E2
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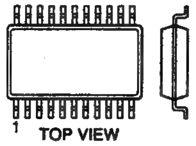
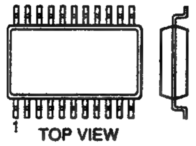
MM1111XF
MM1113XFF
NJM2245M
ST24C02FM6TR
XRA10393F
XRA4558F-E2



8pin SOP

BU4053BCF



16pin SOP

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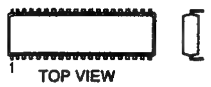

24pin DIP

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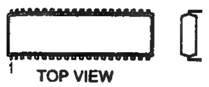

48pin DIP

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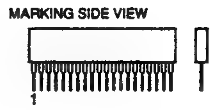
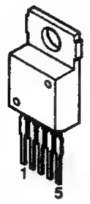
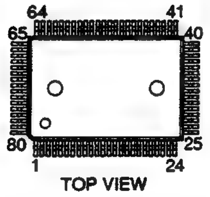


11pin SIP

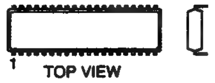
MC14052BF
MC14538BF



MC14094BF

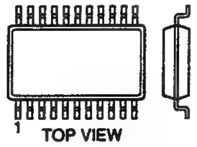


M51279FP



32pin DIP

M62358FP-E1



24pin SOP

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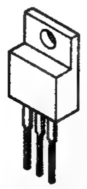
TA7812S



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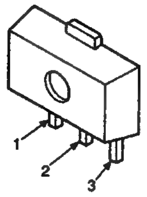

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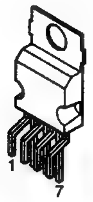

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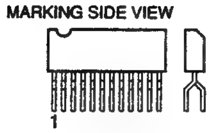

9pin ZIP

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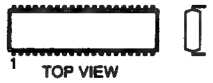

8pin DIP

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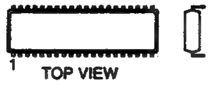

22pin DIP

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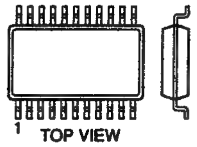

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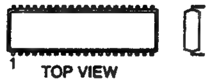

64pin DIP

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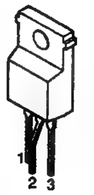

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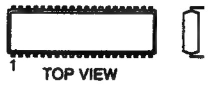

18pin DIP

DTA144EKA-T146
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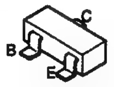

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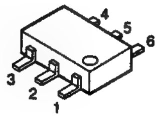

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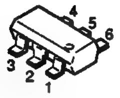

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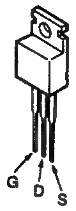

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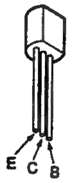

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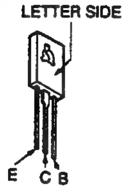

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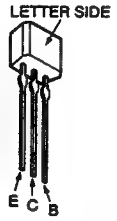
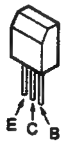


2SC2958
2SD774-34



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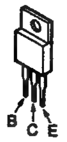
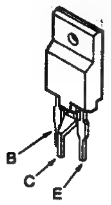
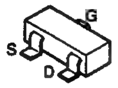
2SC4686A (LBSONY)
2SD1133
2SD1134
2SD2396K



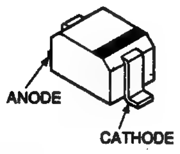
2SD1878-CA



2SK94
2SK94-X2X3X4



DTZ11B
DTZ13C
DTZ5.6B
DTZ6.2
MA111



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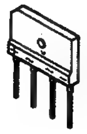

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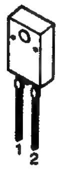

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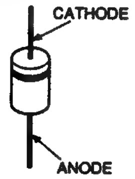

ERA15-06
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RD16ES-B3
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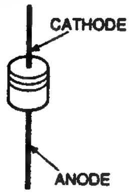
1SS133T-77



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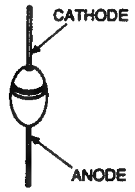
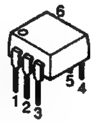
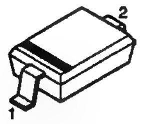
V11N



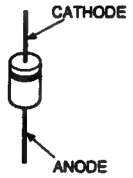
PC111YS



RD10SB1



RH-1A



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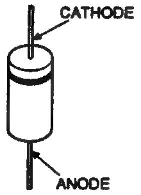

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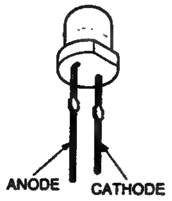

SLP281C-50
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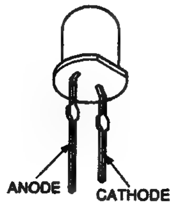
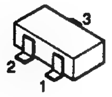
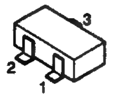


1SS184



1SS226



1SV230TPH3
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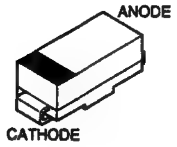

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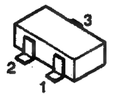


SECTION 7
EXPLODED VIEWS

NOTE:

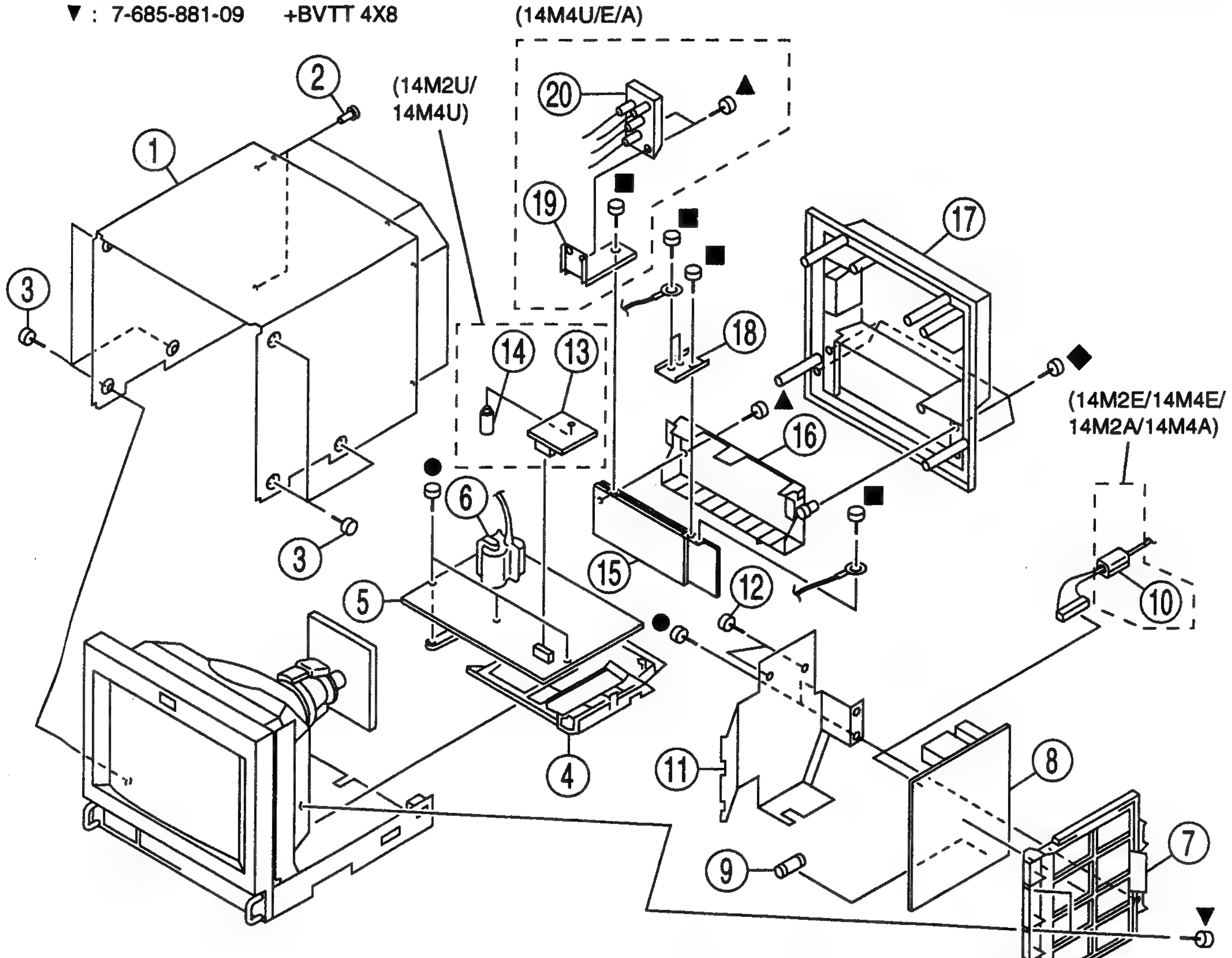
- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The componants identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

7-1. CHASSIS

● : 7-685-648-79 +BVTP 3X12
■ : 7-682-661-01 +PS 4X8
▲ : 7-685-646-79 +BVTP 3X8
◆ : 7-685-663-79 +BVTP 4X16
▼ : 7-685-881-09 +BVTT 4X8



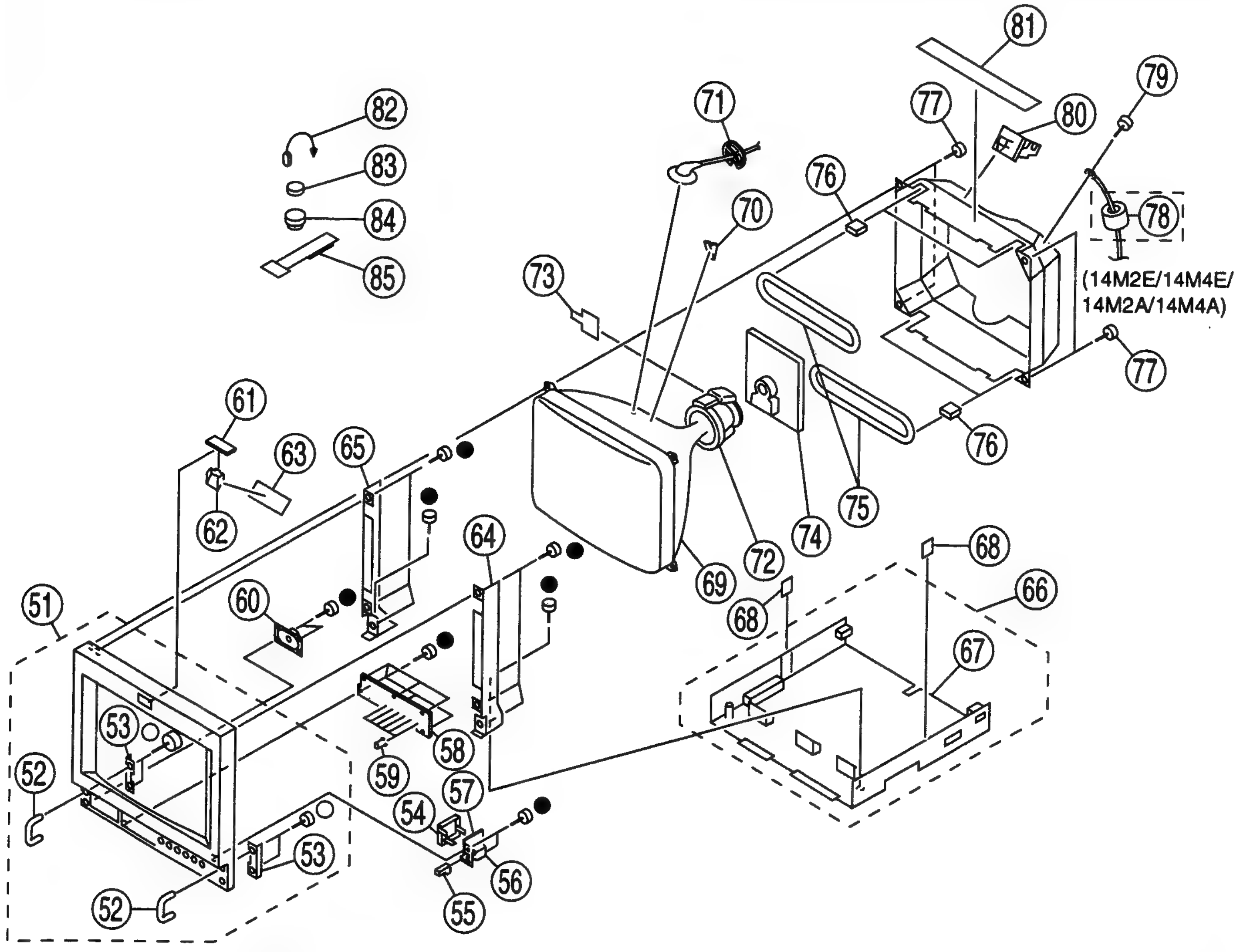
REF. NO.	PART NO.	DESCRIPTION	REMARK
1	X-0515-323-0	COVER ASSY, TOP (14M2U/14M4U/14M2E/14M4E)	
	X-4034-350-1	COVER ASSY, TOP (14M2A/14M4A)	
2	4-391-825-01	RIVET, NYLON	
3	4-847-802-11	SCREW (OS), CASE, CLAW	
4	*4-043-690-01	BRACKET, MAIN	
5	*A-1298-002-A	A BOARD, COMPLETE (14M4U/E/A)	
	*A-1298-006-A	A BOARD, COMPLETE (14M2U/E/A)	
6	⚠1-453-232-11	TRANSFORMER ASSY, FLYBACK (14M2U/E/A)	
	⚠1-453-233-11	TRANSFORMER ASSY, FLYBACK (14M4U/E/A)	
7	*4-043-689-01	BRACKET, G	
8	*A-1316-302-A	G BOARD, COMPLETE	
9	⚠1-576-231-11	FUSE (H.B.C.) 4A/250V	
10	1-543-653-11	CORE ASSY, BEAD (DIVISION TYPE) (14M2E/14M4E/14M2A/14M4A)	
11	*4-057-974-01	SHIELD, G PC BOARD	
12	4-382-854-11	SCREW (M3X10), P,SW (+)	
13	*A-1390-705-A	S BOARD, COMPLETE (14M2U/14M4U)	
14	*3-687-542-41	SPACER, PC BOARD SPACE (14M2U/14M4U)	
15	1-537-735-14	TERMINAL BOARD ASSY, I/O (A) (Q BOARD)	
16	4-043-688-01	PANEL, CONNECTOR	
17	4-055-635-01	COVER, REAR	
18	*4-058-363-01	TERMINAL, EARTH	
19	4-057-971-01	BRACKET, FOCUS VOLUME	
20	⚠1-223-417-11	RESISTOR ASSY (HIGH-VOLTAGE) (14M4U/E/A)	

7-2. PICTURE TUBE

● : 7-685-648-79 +BVTP 3X12
○ : 7-682-563-09 +B 4X12

The componants identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.



REF. NO.	PART NO.	DESCRIPTION	REMARK
51	X-4034-349-1	BEZEL ASSY (14M2U/E/A)	52,53
	X-4034-351-1	BEZEL ASSY (14M4U/E/A)	52,53
52	4-052-200-01	HANDLE, PROTECTOR	
53	*4-043-679-01	REINFORCEMENT, HANDLE	
54	4-043-681-01	COVER, AC SWITCH	
55	4-043-683-01	BUTTOM, POWER SWITCH	
56	⚠1-692-921-01	SWITCH, PUSH (A.C.POWER)	
57	*A-1388-193-A	J BOARD, COMPLETE	
58	*A-1372-302-A	H BOARD, COMPLETE	
59	4-043-802-02	KNOB, CONTROL	
60	1-544-063-12	SPEAKER	
61	*A-1390-704-A	X BOARD, COMPLETE	
62	*4-043-682-01	REFLECTOR, LED	
63	4-044-606-01	CUSHION, TALLY	
64	*A-1450-188-A	BRACKET ASSY (R), SIDE	
65	*A-1450-187-A	BRACKET ASSY (L), SIDE	
66	X-4031-711-1	CABINET ASSY, BOTTOM	67
67	4-391-840-04	CABINET, BOTTOM	
68	4-042-608-01	NUT, PLATE	
69	⚠8-738-335-05	PICTURE TUBE 14MT3(L-BVM, PVM) (14M4U)	
69	⚠8-738-333-05	PICTURE TUBE 14MT1 (L-BVM, PVM) (14M4E/A)	
69	⚠8-738-342-05	PICTURE TUBE 14MG (DARK) (14M2U/E/A)	
70	3-703-961-01	SPACER, DY	
71	3-704-372-01	HOLDER, HV CABLE	
72	⚠1-451-457-11	DEFLECTION YOKE (14M4U/E/A)	
72	⚠8-451-472-11	DEFLECTION YOKE (14M2U/E/A)	
73	X-2105-533-1	PLATE ASSY, CORRECTION, TLH	
74	*A-1331-627-A	C BOARD, COMPLETE (14M4U/E/A)	
74	*A-1331-631-A	C BOARD, COMPLETE (14M2U/E/A)	
75	⚠1-426-442-21	COIL, DEMAGNETIZATION	
76	*4-316-015-00	HOLDER, WIRE	
77	4-365-808-01	SCREW (5), TAPPING	
78	1-543-827-11	CLAMP, SLEEVE FERRITE (14M2E/14M4E/14M2A/14M4A)	
79	4-389-025-01	SCREW (M4) (EXT TOOTH WASHER)	
80	4-033-681-01	HOLDER, LEAD	
81	4-391-833-01	CLOTH, PROTECTION	
82	4-308-870-00	CLIP, LEAD WIRE	
83	1-452-032-00	MAGNET,DISK ; 10mmø	
84	1-452-094-00	MAGNET, ROTATABLE DISK ; 15mmø	
85	4-051-736-21	PIECE A(90), CONV. CORRECT	

SECTION 8
ELECTRICAL PARTS LIST

NOTE:

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

The componants identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

- The components identified by ⧓ in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

When indicating parts by reference number, please include the board name.

RESISTORS
- All resistors are in ohms
- F : nonflammable
- CAPACITORS PF : μμ F
- There are some cases the reference number on one board overlaps on the other board. Therefore, when ordering parts by the reference number, please include the board name.

REF. NO.	PART NO.	DESCRIPTION			REMARK
	* A-1298-002-A	A BOARD, COMPLETE **********************			(PVM-14M4U/E/A)
	* A-1298-006-A	A BOARD, COMPLETE **********************			(PVM-14M2U/E/A)
	* 4-043-994-01	PLATE (CF), SHIELD			
	4-382-854-11	SCREW (M3X10), P, SW (+)			
	7-682-948-01	SCREW +PSW 3X8			
		<BAND PASS FILTER>			
BPF400	1-236-363-11	FILTER, BAND PASS			
		<CAPACITOR>			
C105	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C106	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C114	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C115	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C116	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C117	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C118	1-163-259-91	CERAMIC CHIP	220PF	5%	50V
C119	1-165-319-11	CERAMIC CHIP	0.1MF		50V
C121	1-163-237-11	CERAMIC CHIP	27PF	5%	50V
C123	1-165-319-11	CERAMIC CHIP	0.1MF		50V
C124	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C132	1-163-141-00	CERAMIC CHIP	0.001MF	5%	50V
C133	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C134	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C135	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C136	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C140	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C141	1-164-161-11	CERAMIC CHIP	0.0022MF	10%	50V
C142	1-163-259-91	CERAMIC CHIP	220PF	5%	50V
C143	1-165-319-11	CERAMIC CHIP	0.1MF		50V
C144	1-165-319-11	CERAMIC CHIP	0.1MF		50V
C145	1-165-319-11	CERAMIC CHIP	0.1MF		50V
C154	1-163-037-11	CERAMIC CHIP	0.022MF	10%	50V
C155	1-163-023-00	CERAMIC CHIP	0.015MF	10%	50V
C156	1-163-019-00	CERAMIC CHIP	0.0068MF	10%	50V
C157	1-163-019-00	CERAMIC CHIP	0.0068MF	10%	50V
C158	1-163-809-11	CERAMIC CHIP	0.047MF	10%	25V
C159	1-164-344-11	CERAMIC CHIP	0.068MF	10%	25V
C161	1-104-664-11	ELECT	47MF	20%	25V
C162	1-163-141-00	CERAMIC CHIP	0.001MF	5%	50V
C164	1-165-319-11	CERAMIC CHIP	0.1MF		50V
C165	1-165-319-11	CERAMIC CHIP	0.1MF		50V
C166	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C167	1-126-925-11	ELECT	470MF	20%	10V
C168	1-126-925-11	ELECT	470MF	20%	10V
C169	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C171	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C174	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C200	1-126-963-11	ELECT	4.7MF	20%	50V
C201	1-137-353-11	MYLAR	0.047MF	10%	100V
C202	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C203	1-126-963-11	ELECT	4.7MF	20%	50V
C204	1-126-964-11	ELECT	10MF	20%	50V
C205	1-126-767-11	ELECT	1000MF	20%	16V
C206	1-128-526-11	ELECT	100MF	20%	25V
C207	1-104-665-11	ELECT	100MF	20%	25V
C208	1-126-964-11	ELECT	10MF	20%	50V
C209	1-126-963-11	ELECT	4.7MF	20%	50V
C300	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C301	1-163-086-00	CERAMIC CHIP	3PF	0.25PF	50V
C302	1-163-086-00	CERAMIC CHIP	3PF	0.25PF	50V
C304	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C305	1-163-259-91	CERAMIC CHIP	220PF	5%	50V
C306	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C309	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C310	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C311	1-163-809-11	CERAMIC CHIP	0.047MF	10%	25V
C312	1-126-961-11	ELECT	2.2MF	20%	50V
C313	1-163-145-00	CERAMIC CHIP	0.0015MF	5%	50V
C314	1-163-249-11	CERAMIC CHIP	82PF	5%	50V
C315	1-126-964-11	ELECT	10MF	20%	50V
C316	1-104-664-11	ELECT	47MF	20%	25V
C317	1-163-231-11	CERAMIC CHIP	15PF	5%	50V
C318	1-126-964-11	ELECT	10MF	20%	50V
C319	1-163-222-11	CERAMIC CHIP	5PF	0.25PF	50V
C320	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C322	1-163-119-00	CERAMIC CHIP	120PF	5%	50V
C323	1-163-231-11	CERAMIC CHIP	15PF	5%	50V
C324	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C325	1-126-964-11	ELECT	10MF	20%	50V
C326	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C327	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C328	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C329	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C330	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C331	1-163-231-11	CERAMIC CHIP	15PF	5%	50V
C332	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C333	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C334	1-163-141-00	CERAMIC CHIP	0.001MF	5%	50V
C335	1-163-141-00	CERAMIC CHIP	0.001MF	5%	50V
C336	1-104-664-11	ELECT	47MF	20%	25V
C337	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C338	1-163-119-00	CERAMIC CHIP	120PF	5%	50V
C339	1-163-231-11	CERAMIC CHIP	15PF	5%	50V
C340	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C341	1-163-119-00	CERAMIC CHIP	120PF	5%	50V
C342	1-163-018-00	CERAMIC CHIP	0.0056MF	10%	50V
C343	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C344	1-163-141-00	CERAMIC CHIP	0.001MF	5%	50V
C345	1-163-141-00	CERAMIC CHIP	0.001MF	5%	50V
C346	1-126-960-11	ELECT	1MF	20%	50V
C347	1-163-243-11	CERAMIC CHIP	47PF	5%	50V

A

REF. NO.	PART NO.	DESCRIPTION			REMARK
C348	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C349	1-163-141-00	CERAMIC CHIP	0.001MF	5%	50V
C350	1-163-141-00	CERAMIC CHIP	0.001MF	5%	50V
C351	1-104-664-11	ELECT	47MF	20%	25V
C352	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C353	1-165-319-11	CERAMIC CHIP	0.1MF		50V
C354	1-163-121-00	CERAMIC CHIP	150PF	5%	50V
C355	1-126-960-11	ELECT	1MF	20%	50V
C356	1-126-963-11	ELECT	4.7MF	20%	50V
C357	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C358	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C359	1-104-664-11	ELECT	47MF	20%	25V
C360	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C361	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C362	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C363	1-163-099-00	CERAMIC CHIP	18PF	5%	50V
C364	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C365	1-106-343-00	MYLAR	0.001MF	10%	100V
C366	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C367	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C368	1-124-261-00	ELECT	10MF	20%	50V
C369	1-164-298-11	CERAMIC CHIP	0.15MF	10%	25V
C370	1-104-664-11	ELECT	47MF	20%	25V
C371	1-104-664-11	ELECT	47MF	20%	25V
C372	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C373	1-163-141-00	CERAMIC CHIP	0.001MF	5%	50V
C374	1-126-960-11	ELECT	1MF	20%	50V
C375	1-163-259-91	CERAMIC CHIP	220PF	5%	50V
C376	1-126-959-11	ELECT	0.47MF	20%	50V
C377	1-163-809-11	CERAMIC CHIP	0.047MF	10%	25V
C378	1-163-809-11	CERAMIC CHIP	0.047MF	10%	25V
C379	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C380	1-126-767-11	ELECT	1000MF	20%	16V
C381	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C382	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C383	1-104-664-11	ELECT	47MF	20%	25V
C384	1-163-249-11	CERAMIC CHIP	82PF	5%	50V
C385	1-104-664-11	ELECT	47MF	20%	25V
C386	1-124-261-00	ELECT	10MF	20%	50V
C387	1-163-141-00	CERAMIC CHIP	0.001MF	5%	50V
C388	1-124-261-00	ELECT	10MF	20%	50V
C389	1-104-664-11	ELECT	47MF	20%	25V
C390	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C391	1-104-664-11	ELECT	47MF	20%	25V
C392	1-164-298-11	CERAMIC CHIP	0.15MF	10%	25V
C393	1-164-298-11	CERAMIC CHIP	0.15MF	10%	25V
C394	1-104-664-11	ELECT	47MF	20%	25V
C395	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C396	1-164-299-11	CERAMIC CHIP	0.22MF	10%	25V
C397	1-104-664-11	ELECT	47MF	20%	25V
C398	1-104-664-11	ELECT	47MF	20%	25V
C399	1-104-664-11	ELECT	47MF	20%	25V
C400	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C401	1-164-346-11	CERAMIC CHIP	1MF		16V
C402	1-126-967-11	ELECT	47MF	20%	50V
C403	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C406	1-126-965-11	ELECT	22MF	20%	50V
C407	1-104-664-11	ELECT	47MF	20%	25V
C408	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C409	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C410	1-126-965-11	ELECT	22MF	20%	50V
C411	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C414	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C415	1-126-964-11	ELECT	10MF	20%	50V
C416	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C417	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C418	1-164-182-11	CERAMIC CHIP	0.0033MF	10%	50V
C419	1-126-925-11	ELECT	470MF	20%	10V
C420	1-163-809-11	CERAMIC CHIP	0.047MF	10%	25V
C421	1-164-222-11	CERAMIC CHIP	0.22MF		25V
C422	1-126-960-11	ELECT	1MF	20%	50V
C423	1-163-809-11	CERAMIC CHIP	0.047MF	10%	25V
C424	1-163-809-11	CERAMIC CHIP	0.047MF	10%	25V
C426	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C427	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C428	1-104-661-91	ELECT	330MF	20%	16V
C429	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C430	1-104-661-91	ELECT	330MF	20%	16V
C431	1-165-319-11	CERAMIC CHIP	0.1MF		50V
C432	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C433	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C434	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C435	1-163-089-00	CERAMIC CHIP	6PF	0.25PF	50V
C436	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C437	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C438	1-163-809-11	CERAMIC CHIP	0.047MF	10%	25V
C439	1-163-809-11	CERAMIC CHIP	0.047MF	10%	25V
C440	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C441	1-126-962-11	ELECT	3.3MF	20%	50V
C442	1-163-809-11	CERAMIC CHIP	0.047MF	10%	25V
C443	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C444	1-165-319-11	CERAMIC CHIP	0.1MF		50V
C445	1-163-809-11	CERAMIC CHIP	0.047MF	10%	25V
C446	1-163-089-00	CERAMIC CHIP	6PF	0.25PF	50V
C447	1-163-263-11	CERAMIC CHIP	330PF	5%	50V
C448	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C449	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C450	1-163-809-11	CERAMIC CHIP	0.047MF	10%	25V
C451	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C452	1-163-263-11	CERAMIC CHIP	330PF	5%	50V
C453	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C454	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C455	1-163-263-11	CERAMIC CHIP	330PF	5%	50V
C456	1-163-089-00	CERAMIC CHIP	6PF	0.25PF	50V
C457	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C458	1-163-249-11	CERAMIC CHIP	82PF	5%	50V
C459	1-165-319-11	CERAMIC CHIP	0.1MF		50V
C460	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C461	1-163-119-00	CERAMIC CHIP	120PF	5%	50V
C462	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C463	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C464	1-164-299-11	CERAMIC CHIP	0.22MF	10%	25V
C465	1-163-231-11	CERAMIC CHIP	15PF	5%	50V
C466	1-163-119-00	CERAMIC CHIP	120PF	5%	50V
C467	1-163-119-00	CERAMIC CHIP	120PF	5%	50V
C469	1-163-037-11	CERAMIC CHIP	0.022MF	10%	50V
C470	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C471	1-163-105-00	CERAMIC CHIP	33PF	5%	50V
C472	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C473	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C475	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C476	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C477	1-164-299-11	CERAMIC CHIP	0.22MF	10%	25V
C478	1-126-964-11	ELECT	10MF	20%	50V
C479	1-163-121-00	CERAMIC CHIP	150PF	5%	50V
C482	1-126-925-11	ELECT	470MF	20%	10V
C483	1-163-249-11	CERAMIC CHIP	82PF	5%	50V
C484	1-163-113-00	CERAMIC CHIP	68PF	5%	50V
C485	1-163-113-00	CERAMIC CHIP	68PF	5%	50V
C486	1-163-249-11	CERAMIC CHIP	82PF	5%	50V
C487	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C490	1-164-336-11	CERAMIC CHIP	0.33MF		25V
C491	1-164-336-11	CERAMIC CHIP	0.33MF		25V
C492	1-164-336-11	CERAMIC CHIP	0.33MF		25V
C493	1-104-760-11	CERAMIC CHIP	0.047MF	10%	50V
C494	1-164-005-11	CERAMIC CHIP	0.47MF		25V
C495	1-126-964-11	ELECT	10MF	20%	50V

The componants identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

REF. NO.	PART NO.	DESCRIPTION			REMARK
C496	1-163-249-11	CERAMIC CHIP	82PF	5%	50V
C497	1-163-011-11	CERAMIC CHIP	0.0015MF	10%	50V
C498	1-126-961-11	ELECT	2.2MF	20%	50V
C499	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C500	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C501	1-164-182-11	CERAMIC CHIP	0.0033MF	10%	50V
C502	1-163-141-00	CERAMIC CHIP	0.001MF	5%	50V
C503	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C504	1-136-495-11	FILM	0.068MF	5%	50V
C505	1-163-199-00	CERAMIC CHIP	560PF	5%	50V
C506	1-126-959-11	ELECT	0.47MF	20%	50V
C507	1-128-526-11	ELECT	100MF	20%	25V
C508	1-130-497-00	MYLAR	0.15MF	5%	50V
C509	1-128-566-11	ELECT	470MF	20%	100V
C511	1-107-368-11	FILM	0.047MF	10%	200V
C512	1-126-959-11	ELECT	0.47MF	20%	50V
C513	1-124-261-00	ELECT	10MF	20%	50V
C514	⚠1-129-715-91	FILM	0.012MF	10%	630V (14M4U/E/A)
C514	⚠1-130-338-91	FILM	0.01MF	5%	630V (14M2U/E/A)
C515	1-163-809-11	CERAMIC CHIP	0.047MF	10%	25V
C516	1-102-030-00	CERAMIC	330PF	10%	500V
C517	1-163-024-00	CERAMIC CHIP	0.018MF	10%	50V
C518	1-107-947-11	ELECT	220MF	20%	160V
C519	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C520	1-163-257-11	CERAMIC CHIP	180PF	5%	50V
C521	1-162-114-00	CERAMIC	0.0047MF		2KV
C522	1-126-768-11	ELECT	2200MF	20%	16V
C523	1-107-902-11	ELECT	1MF	20%	50V
C525	⚠1-136-080-11	FILM	0.011MF	3%	2KV (14M4U/E/A)
C525	⚠1-136-079-11	FILM	0.01MF	3%	2KV (14M2U/E/A)
C526	⚠1-162-116-91	CERAMIC	680PF	10%	2KV
C527	1-162-134-11	CERAMIC	470PF	10%	2KV (14M2U/E/A)
C529	1-107-901-11	ELECT	0.47MF	20%	50V
C530	1-104-666-11	ELECT	220MF	20%	25V
C531	1-104-664-11	ELECT	47MF	20%	25V
C532	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C533	1-102-212-00	CERAMIC	820PF	10%	500V
C534	1-107-662-11	ELECT	22MF	20%	250V
C537	1-126-971-11	ELECT	470MF	20%	50V
C538	1-137-150-11	MYLAR	0.01MF	10%	100V
C539	1-130-480-00	FILM	0.0056MF	5%	50V
C540	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C541	1-107-905-11	ELECT	4.7MF	20%	50V
C542	1-136-481-11	MYLAR	0.0022MF	10%	100V
C543	1-136-481-11	MYLAR	0.0022MF	10%	100V
C544	1-137-150-11	MYLAR	0.01MF	10%	100V
C545	1-102-212-00	CERAMIC	820PF	10%	500V
C546	1-163-119-00	CERAMIC CHIP	120PF	5%	50V
C547	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C548	1-102-212-00	CERAMIC	820PF	10%	500V
C549	1-107-906-11	ELECT	10MF	20%	50V
C550	1-107-905-11	ELECT	4.7MF	20%	50V
C551	1-106-375-12	MYLAR	0.022MF	10%	100V
C552	1-107-889-11	ELECT	220MF	20%	25V
C553	1-106-389-00	MYLAR	0.082MF	10%	200V (14M4U/E/A)
C554	1-130-736-11	FILM	0.01MF	5%	50V
C555	1-126-964-11	ELECT	10MF	20%	50V
C556	1-126-964-11	ELECT	10MF	20%	50V
C557	1-106-381-12	MYLAR	0.039MF	10%	100V
C558	1-126-960-11	ELECT	1MF	20%	50V
C559	1-136-173-00	FILM	0.47MF	5%	50V
C561	1-136-159-00	FILM	0.033MF	5%	50V
C564	1-126-964-11	ELECT	10MF	20%	50V

REF. NO.	PART NO.	DESCRIPTION			REMARK
C565	1-126-960-11	ELECT	1MF	20%	50V
C566	1-137-150-11	MYLAR	0.01MF	10%	100V
C567	1-136-499-11	FILM	0.047MF	5%	50V
C568	1-126-960-11	ELECT	1MF	20%	50V
C569	1-131-351-00	TANTALUM	4.7MF	10%	25V
C570	1-126-767-11	ELECT	1000MF	20%	16V
C571	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C572	1-104-709-11	ELECT	4.7MF	0	160V
C573	1-136-173-00	FILM	0.47MF	5%	50V
C575	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C576	1-102-244-00	CERAMIC	220PF	10%	500V
C577	1-107-906-11	ELECT	10MF	20%	50V
C578	1-136-112-00	FILM	1.4MF	5%	200V
C579	1-107-910-11	ELECT	100MF	20%	50V
C580	1-136-756-11	FILM	0.24MF	5%	200V
C581	1-126-963-11	ELECT	4.7MF	20%	50V
C582	1-102-002-00	CERAMIC	680PF	10%	500V
C583	1-136-828-11	FILM	1.8MF	5%	200V
C584	1-107-949-11	ELECT	2.2MF	20%	160V
C585	1-107-960-11	ELECT	4.7MF	20%	250V
C586	1-126-942-61	ELECT	1000MF	20%	25V
C587	1-102-030-00	CERAMIC	330PF	10%	500V
C588	1-107-906-11	ELECT	10MF	20%	50V
C589	1-102-030-00	CERAMIC	330PF	10%	500V
C590	1-107-903-11	ELECT	2.2MF	20%	50V
C591	1-107-365-91	FILM	0.015MF	10%	200V
C592	1-107-635-11	ELECT	4.7MF	20%	160V
C593	1-165-319-11	CERAMIC CHIP	0.1MF		50V
C594	1-163-229-11	CERAMIC CHIP	12PF	5%	50V
C595	1-107-889-11	ELECT	220MF	20%	25V
C596	1-104-665-11	ELECT	100MF	20%	25V
C597	1-164-346-11	CERAMIC CHIP	1MF		16V
C598	1-164-346-11	CERAMIC CHIP	1MF		16V
C599	1-124-261-00	ELECT	10MF	20%	50V
C1300	1-104-664-11	ELECT	47MF	20%	25V
C1301	1-104-664-11	ELECT	47MF	20%	25V
C1302	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C1304	1-104-664-11	ELECT	47MF	20%	25V
C1305	1-104-664-11	ELECT	47MF	20%	25V
C1306	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C1307	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C1308	1-126-933-11	ELECT	100MF	20%	10V
C1309	1-163-257-11	CERAMIC CHIP	180PF	5%	50V
C1310	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C1311	1-104-664-11	ELECT	47MF	20%	25V
C1312	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C1313	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C1314	1-104-664-11	ELECT	47MF	20%	25V
C1315	1-104-664-11	ELECT	47MF	20%	25V
C1316	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C1317	1-104-664-11	ELECT	47MF	20%	25V
C1318	1-104-664-11	ELECT	47MF	20%	25V
C1319	1-163-037-11	CERAMIC CHIP	0.022MF	10%	50V
C1320	1-104-664-11	ELECT	47MF	20%	25V
C1321	1-104-664-11	ELECT	47MF	20%	25V
C1322	1-126-934-11	ELECT	220MF	20%	16V
C1323	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C1324	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C1325	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C1326	1-104-664-11	ELECT	47MF	20%	25V
C1327	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C1328	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C1329	1-126-964-11	ELECT	10MF	20%	50V
C1330	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C1331	1-104-664-11	ELECT	47MF	20%	25V
C1332	1-104-664-11	ELECT	47MF	20%	25V
C1333	1-104-664-11	ELECT	47MF	20%	25V
C1334	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V

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REF. NO.	PART NO.	DESCRIPTION			REMARK
C1335	1-104-664-11	ELECT	47MF	20%	25V
C1336	1-104-664-11	ELECT	47MF	20%	25V
C1338	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C1339	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C1340	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C1341	1-163-275-11	CERAMIC CHIP	0.001MF	5%	50V
C1342	1-163-105-00	CERAMIC CHIP	33PF	5%	50V
C1343	1-163-113-00	CERAMIC CHIP	68PF	5%	50V
C1344	1-163-083-00	CERAMIC CHIP	1PF	0.25PF	50V
C1345	1-124-261-00	ELECT	10MF	20%	50V
C1346	1-124-589-11	ELECT	47MF	20%	16V
C1347	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C1348	1-163-127-00	CERAMIC CHIP	270PF	5%	50V
C1349	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C1350	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C1351	1-126-960-11	ELECT	1MF	20%	50V
C1352	1-163-023-00	CERAMIC CHIP	0.015MF	10%	50V
C1353	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C1354	1-163-121-00	CERAMIC CHIP	150PF	5%	50V
C1355	1-163-259-91	CERAMIC CHIP	220PF	5%	50V
C1356	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C1357	1-104-661-91	ELECT	330MF	20%	16V
C1358	1-124-589-11	ELECT	47MF	20%	16V
C1359	1-163-263-11	CERAMIC CHIP	330PF	5%	50V
C1360	1-164-161-11	CERAMIC CHIP	0.0022MF	10%	50V
C1362	1-163-249-11	CERAMIC CHIP	82PF	5%	50V
C1363	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C1364	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C1365	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C1366	1-104-664-11	ELECT	47MF	20%	25V
C1367	1-104-664-11	ELECT	47MF	20%	25V
C1369	1-163-237-11	CERAMIC CHIP	27PF	5%	50V
C1370	1-163-237-11	CERAMIC CHIP	27PF	5%	50V
C1372	1-104-664-11	ELECT	47MF	20%	25V
C1373	1-104-664-11	ELECT	47MF	20%	25V
C1374	1-104-664-11	ELECT	47MF	20%	25V
C1375	1-126-963-11	ELECT	4.7MF	20%	50V
C1378	1-163-231-11	CERAMIC CHIP	15PF	5%	50V
C1380	1-163-163-00	CERAMIC CHIP	18PF	5%	50V
C1381	1-163-163-00	CERAMIC CHIP	18PF	5%	50V
C1382	1-126-933-11	ELECT	100MF	20%	10V
C1383	1-104-664-11	ELECT	47MF	20%	25V
C1384	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C1385	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C1386	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C1387	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C1388	1-163-229-11	CERAMIC CHIP	12PF	5%	50V
C1393	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C1400	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C1401	1-136-173-00	FILM	0.47MF	5%	50V
C1402	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C1403	1-136-173-00	FILM	0.47MF	5%	50V
C1404	1-164-299-11	CERAMIC CHIP	0.22MF	10%	25V
C1405	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C1406	1-163-090-00	CERAMIC CHIP	7PF	0.25PF	50V
C1407	1-163-085-00	CERAMIC CHIP	2PF	0.25PF	50V
C1408	1-163-113-00	CERAMIC CHIP	68PF	5%	50V
C1500	1-126-768-11	ELECT	2200MF	20%	16V
C1501	1-126-925-11	ELECT	470MF	20%	10V
C1505	1-136-165-00	FILM	0.1MF	5%	50V
C1506	1-104-661-91	ELECT	330MF	20%	16V
C1507	1-163-141-00	CERAMIC CHIP	0.001MF	5%	50V
C1508	1-126-963-11	ELECT	4.7MF	20%	50V
C1509	1-126-964-11	ELECT	10MF	20%	50V
C1510	1-126-963-11	ELECT	4.7MF	20%	50V
C1511	1-164-182-11	CERAMIC CHIP	0.0033MF	10%	50V
C1512	1-126-963-11	ELECT	4.7MF	20%	50V
C1513	1-163-197-00	CERAMIC CHIP	470PF	5%	50V
C1514	1-130-477-00	MYLAR	0.0033MF	5%	50V

REF. NO.	PART NO.	DESCRIPTION			REMARK
C1515	1-126-964-11	ELECT	10MF	20%	50V
C1516	1-163-063-91	CERAMIC CHIP	0.022MF	10%	50V
C1517	1-128-526-11	ELECT	100MF	20%	10V
C1518	1-107-909-11	ELECT	47MF	20%	16V
C1520	1-162-129-00	CERAMIC	150PF	10%	2KV (14M4U/E/A)
C1521	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C1524	1-107-910-11	ELECT	100MF	20%	50V (14M4U/E/A)
C1525	1-162-114-00	CERAMIC	0.0047MF		2KV (14M4U/E/A)
C1530	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C1537	1-130-783-00	MYLAR	0.33MF	10%	100V (14M4U/E/A)
C1538	1-102-074-00	CERAMIC	0.001MF	10%	50V
C2501	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C2502	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C2510	1-136-553-11	FILM	0.0015MF	5%	630V (14M2U/E/A)

<CONNECTOR>

REF. NO.	PART NO.	DESCRIPTION	REMARK
CN101	*1-573-979-11	CONNECTOR, BOARD TO BOARD 11P	
CN102	*1-564-514-11	PLUG, CONNECTOR 11P	
CN104	*1-564-506-11	PLUG, CONNECTOR 3P	
CN105	*1-565-503-11	CONNECTOR, BOARD TO BOARD 12P	
CN201	*1-564-506-11	PLUG, CONNECTOR 3P	
CN301	*1-564-514-11	PLUG, CONNECTOR 11P	
CN302	*1-564-510-11	PLUG, CONNECTOR 7P	
CN303	*1-766-745-11	CONNECTOR, BOARD TO BOARD 12P	
CN305	1-779-070-21	PIN, CONNECTOR 12P	
CN401	*1-564-511-11	PLUG, CONNECTOR 8P	
CN402	*1-564-515-11	PLUG, CONNECTOR 12P	
CN501	*1-580-798-11	CONNECTOR PIN (DY) 6P	
CN502	*1-573-964-11	PIN, CONNECTOR (PC BOARD) 6P	
CN503	*1-573-964-11	PIN, CONNECTOR (PC BOARD) 6P	
CN504	*1-564-506-11	PLUG, CONNECTOR 3P	
CN505	*1-564-506-11	PLUG, CONNECTOR 3P	
CN507	1-695-915-11	TAB (CONTACT)	
CN508	1-766-240-11	PIN, CONNECTOR (PC BOARD) 2P	(14M4U/E/A)

<COMPOSITION CIRCUIT BLOCK>

REF. NO.	PART NO.	DESCRIPTION
CP300	1-236-366-11	MODULE, TRAP
CP301	1-236-365-11	MODULE, TRAP
CP302	1-808-654-21	MODULE
CP303	1-466-162-61	FILTER BLOCK, COM (CFB-4)

<DIODE>

REF. NO.	PART NO.	DESCRIPTION
D100	8-719-404-49	DIODE MA111
D101	8-719-800-76	DIODE 1SS226
D102	8-719-800-76	DIODE 1SS226
D103	8-719-045-70	DIODE 1SV230TPH3
D104	8-719-800-76	DIODE 1SS226
D105	8-719-800-76	DIODE 1SS226
D107	8-719-800-76	DIODE 1SS226
D108	8-719-104-34	DIODE 1S2836
D109	8-719-801-78	DIODE 1SS184
D111	8-719-977-05	DIODE DTZ6.2
D114	8-719-404-49	DIODE MA111
D115	8-719-977-05	DIODE DTZ6.2
D116	8-719-404-49	DIODE MA111
D200	8-719-977-46	DIODE DTZ13C
D300	8-719-025-07	DIODE 1SV232-TPH3
D301	8-719-404-49	DIODE MA111
D303	8-719-977-05	DIODE DTZ6.2
D304	8-719-801-78	DIODE 1SS184
D305	8-719-800-76	DIODE 1SS226

REF. NO.	PART NO.	DESCRIPTION	REMARK
D307	8-719-404-49	DIODE MA111	
D308	8-719-404-49	DIODE MA111	
D309	8-719-404-49	DIODE MA111	
D310	8-719-104-34	DIODE 1S2836	
D311	8-719-045-70	DIODE 1SV230TPH3	
D313	8-719-801-78	DIODE 1SS184	
D314	8-719-404-49	DIODE MA111	
D315	8-719-404-49	DIODE MA111	
D317	8-719-404-49	DIODE MA111	
D320	8-719-404-49	DIODE MA111	
D322	8-719-404-49	DIODE MA111	
D323	8-719-404-49	DIODE MA111	
D324	8-719-045-70	DIODE 1SV230TPH3	
D325	8-719-801-78	DIODE 1SS184	
D326	8-719-045-70	DIODE 1SV230TPH3	
D327	8-719-104-34	DIODE 1S2836	
D332	8-719-404-49	DIODE MA111	
D333	8-719-404-49	DIODE MA111	
D335	8-719-404-49	DIODE MA111	
D336	8-719-404-49	DIODE MA111	
D337	8-719-404-49	DIODE MA111	
D338	8-719-404-49	DIODE MA111	
D339	8-719-404-49	DIODE MA111	
D344	8-719-801-78	DIODE 1SS184	
D345	8-719-104-34	DIODE 1S2836	
D346	8-719-104-34	DIODE 1S2836	
D347	8-719-104-34	DIODE 1S2836	
D360	1-216-295-91	CONDUCTOR, CHIP	
D361	1-216-295-91	CONDUCTOR, CHIP	
D362	8-719-158-40	DIODE RD10SB1	
D363	8-719-158-40	DIODE RD10SB1	
D364	8-719-104-34	DIODE 1S2836	
D365	8-719-404-49	DIODE MA111	
D381	8-719-404-49	DIODE MA111	
D401	8-719-404-49	DIODE MA111	
D404	8-719-800-76	DIODE 1SS226	
D405	8-719-801-78	DIODE 1SS184	
D406	8-719-404-49	DIODE MA111	
D407	8-719-404-49	DIODE MA111	
D408	8-719-404-49	DIODE MA111	
D410	8-719-404-49	DIODE MA111	
D411	8-719-404-49	DIODE MA111	
D414	8-719-801-78	DIODE 1SS184	
D415	8-719-801-78	DIODE 1SS184	
D416	8-719-801-78	DIODE 1SS184	
D417	8-719-801-78	DIODE 1SS184	
D418	8-719-801-78	DIODE 1SS184	
D421	8-719-404-49	DIODE MA111	
D422	8-719-404-49	DIODE MA111	
D423	8-719-800-76	DIODE 1SS226	
D424	8-719-404-49	DIODE MA111	
D425	8-719-800-76	DIODE 1SS226	
D427	8-719-404-49	DIODE MA111	
D500	8-719-404-49	DIODE MA111	
D501	8-719-977-03	DIODE DTZ5.6B	
D502	8-719-979-80	DIODE UF5406	
D503	8-719-404-49	DIODE MA111	
D504	8-719-901-83	DIODE 1SS83	
D505	8-719-028-72	DIODE RGP02-17EL-6433	
D506	8-719-033-83	DIODE ERD07-15	
D507	8-719-800-76	DIODE 1SS226	
D508	8-719-800-76	DIODE 1SS226	
D509	8-719-404-49	DIODE MA111	
D510	8-719-302-43	DIODE EL1Z	
D512	8-719-979-80	DIODE UF5406	
D513	8-719-404-49	DIODE MA111	
D514	8-719-971-20	DIODE ERC38-06	
D515	8-719-971-20	DIODE ERC38-06	

REF. NO.	PART NO.	DESCRIPTION	REMARK
D516	8-719-404-49	DIODE MA111	
D517	8-719-404-49	DIODE MA111	
D518	8-719-404-49	DIODE MA111	
D519	8-719-404-49	DIODE MA111	
D520	8-719-801-78	DIODE 1SS184	
D521	8-719-404-49	DIODE MA111	
D522	8-719-977-05	DIODE DTZ6.2	
D523	8-719-920-76	DIODE 1S2076	
D524	8-719-200-02	DIODE 10E-2	
D525	8-719-200-02	DIODE 10E-2	
D526	8-719-404-49	DIODE MA111	
D527	8-719-200-02	DIODE 10E-2	
D528	8-719-300-76	DIODE RH-1A	
D529	8-719-200-02	DIODE 10E-2	
D530	8-719-300-76	DIODE RH-1A	
D531	8-719-977-32	DIODE DTZ11B	
D532	8-719-800-76	DIODE 1SS226	
D533	8-719-302-43	DIODE EL1Z	
D534	8-719-404-49	DIODE MA111	
D535	8-719-404-49	DIODE MA111	
D536	8-719-800-76	DIODE 1SS226	
D537	8-719-800-76	DIODE 1SS226	
D538	8-719-800-76	DIODE 1SS226	
D539	8-719-920-76	DIODE 1S2076	
D540	8-719-404-49	DIODE MA111	
D541	8-719-801-78	DIODE 1SS184	
D542	8-719-404-49	DIODE MA111	
D543	8-719-404-49	DIODE MA111	
D544	8-719-404-49	DIODE MA111 (14M4U/E/A)	
D545	8-719-404-49	DIODE MA111 (14M4U/E/A)	
D546	8-719-901-19	DIODE V11N (14M4U/E/A)	
D547	8-719-404-49	DIODE MA111	
D548	8-719-110-46	DIODE RD16ESB3 (14M4U/E/A)	

<DELAY LINE>

REF. NO.	PART NO.	DESCRIPTION	REMARK
DL300	1-415-633-11	DELAY LINE, Y	
DL301	1-415-632-11	DELAY LINE, Y	
DL401	1-409-547-11	DELAY LINE	

<FERRITE BEAD>

REF. NO.	PART NO.	DESCRIPTION	REMARK
FB501	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH	

<FILTER>

REF. NO.	PART NO.	DESCRIPTION	REMARK
FL300	1-236-547-11	TRAP, LC	
FL401	1-236-364-11	FILTER, BAND PASS	

<IC>

REF. NO.	PART NO.	DESCRIPTION	REMARK
IC101	1-540-044-11	SOCKET, IC	
IC101	8-759-462-05	IC uPD78P018FYCW-M01	
IC102	8-759-354-28	IC ST24C02FM6TR	
IC103	8-759-008-48	IC MC74HC86F	
IC104	8-759-262-59	IC uPD6451AGT-632-E2	
IC105	8-759-196-70	IC M62358FP-E1	
IC106	8-759-196-70	IC M62358FP-E1	
IC107	8-759-196-70	IC M62358FP-E1	
IC108	8-759-042-02	IC S-80743AL-A7-S	
IC109	8-759-196-70	IC M62358FP-E1	
IC110	8-759-196-70	IC M62358FP-E1	
IC111	8-759-009-22	IC MC14094BF	
IC112	8-759-354-27	IC ST24C01FM6TR	
IC200	8-759-420-04	IC AN5265	
IC301	8-752-053-21	IC CXA1211M	
IC302	8-759-998-98	IC LM358D	
IC303	8-752-056-67	IC CXA1214P	
IC304	8-759-932-67	IC BU4053BCF	
IC305	8-759-631-08	IC M51279FP	

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

REF. NO.	PART NO.	DESCRIPTION	REMARK
IC306	8-759-711-32	IC NJM2245M	
IC309	8-759-711-32	IC NJM2245M	
IC310	8-759-932-67	IC BU4053BCF	
IC311	8-759-008-67	IC MC14066BF	
IC312	8-759-711-32	IC NJM2245M	
IC313	8-759-287-89	IC MM1113XFF	
IC314	8-759-287-89	IC MM1113XFF	
IC315	8-759-932-67	IC BU4053BCF	
IC316	8-759-084-76	IC MM1111XF	
IC317	8-759-009-51	IC MC14538BF	
IC318	8-759-009-67	IC MC14584BF	
IC320	8-759-287-89	IC MM1113XFF	
IC321	8-759-287-89	IC MM1113XFF	
IC322	8-759-287-89	IC MM1113XFF	
IC323	8-759-287-89	IC MM1113XFF	
IC324	8-759-287-89	IC MM1113XFF	
IC325	8-759-287-89	IC MM1113XFF	
IC326	8-759-060-00	IC BA10324AF	
IC327	8-759-008-67	IC MC14066BF	
IC350	8-759-100-96	IC uPC4558G2	
IC401	8-759-196-69	IC BA7655AF-E2	
IC402	8-752-053-21	IC CXA1211M	
IC403	8-759-008-67	IC MC14066BF	
IC404	8-752-067-05	IC CXA1739S	
IC405	8-759-932-67	IC BU4053BCF	
IC406	8-759-998-98	IC LM358D	
IC407	8-759-008-67	IC MC14066BF	
IC408	8-759-509-91	IC XRA10393F	
IC409	8-759-060-00	IC BA10324AF	
IC410	8-759-009-06	IC MC14052BF	
IC411	8-759-008-92	IC MC14024BF	
IC412	8-759-932-67	IC BU4053BCF	
IC413	8-759-932-67	IC BU4053BCF	
IC500	8-749-010-07	IC H8D7248	
IC502	8-759-009-51	IC MC14538BF	
IC503	8-759-009-51	IC MC14538BF	
IC504	8-752-053-21	IC CXA1211M	
IC505	8-759-520-07	IC XRA17812T	
IC506	8-759-009-51	IC MC14538BF	
IC507	8-759-100-60	IC uPC1377C	
IC508	8-752-053-21	IC CXA1211M	
IC509	8-759-998-98	IC LM358D	
IC510	8-759-009-51	IC MC14538BF	
		<CHIP CONDUCTOR>	
JR302	1-216-295-91	CONDUCTOR, CHIP	
JR307	1-216-295-91	CONDUCTOR, CHIP	
JR310	1-216-295-91	CONDUCTOR, CHIP	
		<COIL>	
L101	1-408-609-41	INDUCTOR 33UH	
L102	1-408-417-00	INDUCTOR 47UH	
L104	1-408-425-00	INDUCTOR 220UH	
L105	1-410-482-31	INDUCTOR 100UH	
L300	1-410-478-11	INDUCTOR 47UH	
L301	1-408-411-00	INDUCTOR 15UH	
L302	1-412-008-31	INDUCTOR CHIP 15UH	
L303	1-408-416-00	INDUCTOR 39UH	
L304	1-412-008-31	INDUCTOR CHIP 15UH	
L305	1-410-196-11	INDUCTOR CHIP 2.2UH	
L306	1-408-416-00	INDUCTOR 39UH	
L307	1-408-411-00	INDUCTOR 15UH	
L308	1-410-466-41	INDUCTOR 4.7UH	
L309	1-410-470-11	INDUCTOR 10UH	
L311	1-410-470-11	INDUCTOR 10UH	
L312	1-412-011-31	INDUCTOR CHIP 27UH	
L314	1-412-011-31	INDUCTOR CHIP 27UH	
L316	1-412-011-31	INDUCTOR CHIP 27UH	
L317	1-410-090-41	INDUCTOR 18mH	
L319	1-408-421-00	INDUCTOR 100UH	
L320	1-410-682-31	INDUCTOR 470UH	
L401	1-410-478-11	INDUCTOR 47UH	
L402	1-410-216-31	INDUCTOR CHIP 100UH	
L403	1-410-216-31	INDUCTOR CHIP 100UH	
L404	1-410-216-31	INDUCTOR CHIP 100UH	
L405	1-408-419-00	INDUCTOR 68UH	
L406	1-408-419-00	INDUCTOR 68UH	
L407	1-408-413-00	INDUCTOR 22UH	
L408	1-408-413-00	INDUCTOR 22UH	
L409	1-410-214-31	INDUCTOR CHIP 68UH	
L500	1-459-155-00	COIL (WITH CORE) 45UH	
L501	1-407-365-00	COIL,CHOKE	
L502	1-407-365-00	COIL,CHOKE	
L503	1-410-093-11	INDUCTOR 33mH	
L504	1-410-666-31	INDUCTOR 18UH	
L505	1-410-671-31	INDUCTOR 47UH	
L506	1-416-239-11	COIL, CHOKE 3.00mH (14M4U/E/A)	
L507	1-410-686-11	INDUCTOR 1mH	
L508	1-412-530-31	INDUCTOR 27UH	
L509	1-459-075-11	COIL,DYNAMIC CONVERSION CHOKE	
L511	1-459-105-21	COIL(WITH CORE)	
L512	⚠1-459-155-11	COIL (WITH CORE) 45UH	
L513	1-412-447-11	INDUCTOR 3.9mH	
L514	1-459-104-00	COIL, DUST CORE	
L515	1-459-059-00	COIL,DUST CORE	
L516	1-416-162-11	COIL, HORIZONTAL LINEARITY	
L517	1-412-547-21	INDUCTOR 680UH	
		<NEON LAMP>	
NL500	1-519-526-11	LAMP, NEON	
		<TRANSISTOR>	
Q101	8-729-027-59	TRANSISTOR DTC144EKA-T146	
Q102	8-729-216-22	TRANSISTOR 2SA1162-G	
Q103	8-729-216-22	TRANSISTOR 2SA1162-G	
Q104	8-729-907-26	TRANSISTOR IMX1	
Q105	8-729-027-38	TRANSISTOR DTA144EKA-T146	
Q107	8-729-027-38	TRANSISTOR DTA144EKA-T146	
Q108	8-729-422-29	TRANSISTOR 2SD601A-S	
Q109	8-729-422-29	TRANSISTOR 2SD601A-S	
Q110	8-729-422-29	TRANSISTOR 2SD601A-S	
Q111	8-729-027-38	TRANSISTOR DTA144EKA-T146	
Q112	8-729-422-29	TRANSISTOR 2SD601A-S	
Q113	8-729-422-29	TRANSISTOR 2SD601A-S	
Q114	8-729-422-29	TRANSISTOR 2SD601A-S	
Q200	8-729-140-96	TRANSISTOR 2SD774-34	
Q201	8-729-422-29	TRANSISTOR 2SD601A-S	
Q300	8-729-422-29	TRANSISTOR 2SD601A-S	
Q301	8-729-422-29	TRANSISTOR 2SD601A-S	
Q302	8-729-216-22	TRANSISTOR 2SA1162-G	
Q303	8-729-422-29	TRANSISTOR 2SD601A-S	
Q305	8-729-422-29	TRANSISTOR 2SD601A-S	
Q306	8-729-422-29	TRANSISTOR 2SD601A-S	
Q307	8-729-422-29	TRANSISTOR 2SD601A-S	
Q308	8-729-422-29	TRANSISTOR 2SD601A-S	
Q309	8-729-422-37	TRANSISTOR 2SB709A-R	
Q310	8-729-422-37	TRANSISTOR 2SB709A-R	
Q311	8-729-422-37	TRANSISTOR 2SB709A-R	
Q312	8-729-422-29	TRANSISTOR 2SD601A-S	
Q313	8-729-422-37	TRANSISTOR 2SB709A-R	
Q314	8-729-027-38	TRANSISTOR DTA144EKA-T146	
Q315	8-729-422-37	TRANSISTOR 2SB709A-R	

REF. NO.	PART NO.	DESCRIPTION	REMARK
Q316	8-729-422-29	TRANSISTOR 2SD601A-S	
Q318	8-729-422-37	TRANSISTOR 2SB709A-R	
Q319	8-729-422-29	TRANSISTOR 2SD601A-S	
Q320	8-729-422-29	TRANSISTOR 2SD601A-S	
Q321	8-729-422-29	TRANSISTOR 2SD601A-S	
Q322	8-729-422-29	TRANSISTOR 2SD601A-S	
Q323	8-729-027-59	TRANSISTOR DTC144EKA-T146	
Q324	8-729-027-59	TRANSISTOR DTC144EKA-T146	
Q325	8-729-422-29	TRANSISTOR 2SD601A-S	
Q326	8-729-422-29	TRANSISTOR 2SD601A-S	
Q327	8-729-422-37	TRANSISTOR 2SB709A-R	
Q328	8-729-141-53	TRANSISTOR 2SK94-X2X3X4	
Q329	8-729-141-53	TRANSISTOR 2SK94-X2X3X4	
Q330	8-729-422-37	TRANSISTOR 2SB709A-R	
Q331	8-729-422-37	TRANSISTOR 2SB709A-R	
Q332	8-729-027-59	TRANSISTOR DTC144EKA-T146	
Q333	8-729-422-29	TRANSISTOR 2SD601A-S	
Q334	8-729-422-37	TRANSISTOR 2SB709A-R	
Q335	8-729-422-29	TRANSISTOR 2SD601A-S	
Q336	8-729-109-44	TRANSISTOR 2SK94-X4	
Q337	8-729-422-29	TRANSISTOR 2SD601A-S	
Q338	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q339	8-729-422-37	TRANSISTOR 2SB709A-R	
Q341	8-729-920-39	TRANSISTOR IMT1US	
Q342	8-729-920-39	TRANSISTOR IMT1US	
Q343	8-729-920-39	TRANSISTOR IMT1US	
Q345	8-729-422-29	TRANSISTOR 2SD601A-S	
Q346	8-729-422-29	TRANSISTOR 2SD601A-S	
Q347	8-729-027-59	TRANSISTOR DTC144EKA-T146	
Q348	8-729-422-37	TRANSISTOR 2SB709A-R	
Q349	8-729-422-37	TRANSISTOR 2SB709A-R	
Q350	8-729-422-37	TRANSISTOR 2SB709A-R	
Q351	8-729-422-29	TRANSISTOR 2SD601A-S	
Q352	8-729-422-29	TRANSISTOR 2SD601A-S	
Q353	8-729-422-29	TRANSISTOR 2SD601A-S	
Q354	8-729-422-29	TRANSISTOR 2SD601A-S	
Q355	8-729-422-29	TRANSISTOR 2SD601A-S	
Q356	8-729-027-59	TRANSISTOR DTC144EKA-T146	
Q357	8-729-422-29	TRANSISTOR 2SD601A-S	
Q358	8-729-422-29	TRANSISTOR 2SD601A-S	
Q359	8-729-422-37	TRANSISTOR 2SB709A-R	
Q360	8-729-907-26	TRANSISTOR IMX1	
Q361	8-729-027-38	TRANSISTOR DTA144EKA-T146	
Q362	8-729-422-29	TRANSISTOR 2SD601A-S	
Q363	8-729-422-29	TRANSISTOR 2SD601A-S	
Q364	8-729-027-59	TRANSISTOR DTC144EKA-T146	
Q366	8-729-422-37	TRANSISTOR 2SB709A-R	
Q367	8-729-422-37	TRANSISTOR 2SB709A-R	
Q368	8-729-422-37	TRANSISTOR 2SB709A-R	
Q369	8-729-027-38	TRANSISTOR DTA144EKA-T146	
Q372	8-729-027-59	TRANSISTOR DTC144EKA-T146	
Q401	8-729-422-29	TRANSISTOR 2SD601A-S	
Q402	8-729-422-29	TRANSISTOR 2SD601A-S	
Q403	8-729-027-59	TRANSISTOR DTC144EKA-T146	
Q404	8-729-422-37	TRANSISTOR 2SB709A-R	
Q405	8-729-422-37	TRANSISTOR 2SB709A-R	
Q406	8-729-422-29	TRANSISTOR 2SD601A-S	
Q407	8-729-422-29	TRANSISTOR 2SD601A-S	
Q408	8-729-422-37	TRANSISTOR 2SB709A-R	
Q409	8-729-422-37	TRANSISTOR 2SB709A-R	
Q410	8-729-907-26	TRANSISTOR IMX1	
Q411	8-729-422-29	TRANSISTOR 2SD601A-S	
Q412	8-729-216-22	TRANSISTOR 2SA1162-G	
Q413	8-729-141-53	TRANSISTOR 2SK94-X2X3X4	
Q414	8-729-422-37	TRANSISTOR 2SB709A-R	
Q415	8-729-422-37	TRANSISTOR 2SB709A-R	
Q416	8-729-422-37	TRANSISTOR 2SB709A-R	
Q417	8-729-422-37	TRANSISTOR 2SB709A-R	
Q418	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q419	8-729-422-37	TRANSISTOR 2SB709A-R	

REF. NO.	PART NO.	DESCRIPTION	REMARK
Q420	8-729-422-37	TRANSISTOR 2SB709A-R	
Q421	8-729-027-59	TRANSISTOR DTC144EKA-T146	
Q422	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q423	8-729-422-29	TRANSISTOR 2SD601A-S	
Q424	8-729-027-59	TRANSISTOR DTC144EKA-T146	
Q425	8-729-027-59	TRANSISTOR DTC144EKA-T146	
Q426	8-729-027-59	TRANSISTOR DTC144EKA-T146	
Q428	8-729-422-37	TRANSISTOR 2SB709A-R	
Q429	8-729-422-37	TRANSISTOR 2SB709A-R	
Q430	8-729-422-29	TRANSISTOR 2SD601A-S	
Q431	8-729-422-29	TRANSISTOR 2SD601A-S	
Q432	8-729-422-29	TRANSISTOR 2SD601A-S	
Q433	8-729-027-59	TRANSISTOR DTC144EKA-T146	
Q434	8-729-422-29	TRANSISTOR 2SD601A-S	
Q435	8-729-027-59	TRANSISTOR DTC144EKA-T146	
Q436	8-729-027-59	TRANSISTOR DTC144EKA-T146	
Q437	8-729-027-59	TRANSISTOR DTC144EKA-T146	
Q438	8-729-422-29	TRANSISTOR 2SD601A-S	
Q439	8-729-216-22	TRANSISTOR 2SA1162-G	
Q440	8-729-422-29	TRANSISTOR 2SD601A-S	
Q441	8-729-141-53	TRANSISTOR 2SK94-X2X3X4	
Q442	8-729-422-29	TRANSISTOR 2SD601A-S	
Q443	8-729-216-22	TRANSISTOR 2SA1162-G	
Q444	8-729-422-29	TRANSISTOR 2SD601A-S	
Q445	8-729-027-59	TRANSISTOR DTC144EKA-T146	
Q446	8-729-027-59	TRANSISTOR DTC144EKA-T146	
Q447	8-729-027-59	TRANSISTOR DTC144EKA-T146	
Q448	8-729-027-59	TRANSISTOR DTC144EKA-T146	
Q449	8-729-027-59	TRANSISTOR DTC144EKA-T146	
Q500	8-729-422-37	TRANSISTOR 2SB709A-R	
Q501	8-729-821-87	TRANSISTOR 2SD1878-CA	
Q502	8-729-119-80	TRANSISTOR 2SC2688-LK	
Q505	8-729-422-29	TRANSISTOR 2SD601A-S	
Q506	8-729-422-29	TRANSISTOR 2SD601A-S	
Q507	8-729-422-29	TRANSISTOR 2SD601A-S	
Q508	8-729-422-37	TRANSISTOR 2SB709A-R	
Q509	8-729-027-38	TRANSISTOR DTA144EKA-T146	
Q510	8-729-027-59	TRANSISTOR DTC144EKA-T146	
Q511	8-729-422-29	TRANSISTOR 2SD601A-S	
Q513	8-729-122-03	TRANSISTOR 2SA1220A-P	
Q514	8-729-901-00	TRANSISTOR DTC124EK	
Q515	8-729-106-92	TRANSISTOR 2SC2690A-Q	
Q516	8-729-027-59	TRANSISTOR DTC144EKA-T146	
Q517	8-729-027-38	TRANSISTOR DTA144EKA-T146	
Q518	8-729-027-59	TRANSISTOR DTC144EKA-T146	
Q519	8-729-027-59	TRANSISTOR DTC144EKA-T146	
Q520	8-729-021-82	TRANSISTOR 2SD2396K	
Q522	8-729-422-29	TRANSISTOR 2SD601A-S	
Q523	8-729-422-29	TRANSISTOR 2SD601A-S	
Q524	8-729-422-29	TRANSISTOR 2SD601A-S	
Q525	8-729-422-37	TRANSISTOR 2SB709A-R	
Q526	8-729-020-07	TRANSISTOR 2SC4686A(LBSONY)	(14M4U/E/A)
Q527	8-729-020-07	TRANSISTOR 2SC4686A(LBSONY)	(14M4U/E/A)
Q528	8-729-802-71	TRANSISTOR 2SA1407-D	
Q529	8-729-027-59	TRANSISTOR DTC144EKA-T146	
Q530	8-729-027-59	TRANSISTOR DTC144EKA-T146	
Q531	8-729-216-22	TRANSISTOR 2SA1162-G (14M4U/E/A)	
Q532	8-729-927-31	TRANSISTOR IRF520 (14M4U/E/A)	

<RESISTOR>

REF. NO.	PART NO.	DESCRIPTION			
R101	1-216-025-91	METAL GLAZE	100	5%	1/10W
R102	1-216-025-91	METAL GLAZE	100	5%	1/10W
R103	1-216-025-91	METAL GLAZE	100	5%	1/10W
R104	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R105	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W
R106	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R107	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W

A

REF. NO.	PART NO.	DESCRIPTION			REMARK
R108	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R109	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R110	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R113	1-216-085-00	METAL GLAZE	33K	5%	1/10W
R117	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R119	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R124	1-216-295-91	CONDUCTOR, CHIP			
R130	1-216-099-00	METAL GLAZE	120K	5%	1/10W
R132	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R133	1-216-091-00	METAL GLAZE	56K	5%	1/10W
R134	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R135	1-216-085-00	METAL GLAZE	33K	5%	1/10W
R137	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R140	1-216-033-00	METAL GLAZE	220	5%	1/10W
R141	1-216-085-00	METAL GLAZE	33K	5%	1/10W
R144	1-216-295-91	CONDUCTOR, CHIP			
R149	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R151	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W
R154	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R155	1-216-083-00	METAL GLAZE	27K	5%	1/10W
R157	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R158	1-216-295-91	CONDUCTOR, CHIP			
R159	1-216-063-91	METAL GLAZE	3.9K	5%	1/10W
R160	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W
R162	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R163	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R164	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W
R165	1-216-295-91	CONDUCTOR, CHIP			
R167	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W
R168	1-216-085-00	METAL GLAZE	33K	5%	1/10W
R169	1-216-107-00	METAL GLAZE	270K	5%	1/10W
R171	1-216-031-00	METAL GLAZE	180	5%	1/10W
R172	1-216-295-91	CONDUCTOR, CHIP			
R177	1-216-214-00	METAL GLAZE	4.7K	5%	1/8W
R181	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R184	1-216-649-11	METAL CHIP	820	0.50%	1/10W
R185	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R187	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W
R189	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R190	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R192	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R195	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W
R197	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W
R199	1-216-295-91	CONDUCTOR, CHIP			
R200	1-216-686-11	METAL CHIP	30K	0.50%	1/10W
R201	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R202	1-212-857-00	FUSIBLE	10	5%	1/4W F
R203	1-260-095-11	CARBON	470	5%	1/2W
R204	1-260-072-11	CARBON	4.7	5%	1/2W
R205	1-216-647-11	METAL CHIP	680	0.50%	1/10W
R206	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R207	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R208	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R209	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R210	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W
R211	1-249-393-11	CARBON	10	5%	1/4W F
R237	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R301	1-216-025-91	METAL GLAZE	100	5%	1/10W
R302	1-216-025-91	METAL GLAZE	100	5%	1/10W
R303	1-216-025-91	METAL GLAZE	100	5%	1/10W
R304	1-216-025-91	METAL GLAZE	100	5%	1/10W
R305	1-216-295-91	CONDUCTOR, CHIP			
R306	1-216-295-91	CONDUCTOR, CHIP			
R307	1-216-115-00	METAL GLAZE	560K	5%	1/10W
R308	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R311	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W
R312	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R313	1-216-648-11	METAL CHIP	750	0.50%	1/10W
R314	1-216-099-00	METAL GLAZE	120K	5%	1/10W
R315	1-216-099-00	METAL GLAZE	120K	5%	1/10W
R316	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R317	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R318	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R319	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W
R320	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R321	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W
R322	1-216-035-00	METAL GLAZE	270	5%	1/10W
R323	1-216-109-00	METAL GLAZE	330K	5%	1/10W
R324	1-216-101-00	METAL GLAZE	150K	5%	1/10W
R325	1-216-037-00	METAL GLAZE	330	5%	1/10W
R326	1-216-033-00	METAL GLAZE	220	5%	1/10W
R328	1-216-121-91	METAL GLAZE	1M	5%	1/10W
R329	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W
R330	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R331	1-216-093-00	METAL GLAZE	68K	5%	1/10W
R332	1-216-097-91	METAL GLAZE	100K	5%	1/10W
R333	1-216-097-91	METAL GLAZE	100K	5%	1/10W
R334	1-216-093-00	METAL GLAZE	68K	5%	1/10W
R335	1-216-083-00	METAL GLAZE	27K	5%	1/10W
R336	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R337	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R338	1-216-091-00	METAL GLAZE	56K	5%	1/10W
R339	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W
R340	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R341	1-216-673-11	METAL CHIP	8.2K	0.50%	1/10W
R342	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R343	1-216-095-00	METAL GLAZE	82K	5%	1/10W
R344	1-216-099-00	METAL GLAZE	120K	5%	1/10W
R345	1-216-063-91	METAL GLAZE	3.9K	5%	1/10W
R346	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R347	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R348	1-216-031-00	METAL GLAZE	180	5%	1/10W
R349	1-216-694-11	METAL CHIP	62K	0.50%	1/10W
R350	1-216-085-00	METAL GLAZE	33K	5%	1/10W
R351	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W
R352	1-216-675-11	METAL CHIP	10K	0.50%	1/10W
R353	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R354	1-216-123-11	METAL GLAZE	1.2M	5%	1/10W
R355	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W
R356	1-216-689-11	METAL GLAZE	39K	5%	1/10W
R357	1-216-121-91	METAL GLAZE	1M	5%	1/10W
R358	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W
R359	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R360	1-216-039-00	METAL GLAZE	390	5%	1/10W
R361	1-216-017-91	METAL GLAZE	47	5%	1/10W
R362	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W
R363	1-216-113-00	METAL GLAZE	470K	5%	1/10W
R364	1-216-113-00	METAL GLAZE	470K	5%	1/10W
R366	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R367	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W
R368	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R371	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W
R372	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W
R373	1-216-645-11	METAL CHIP	560	0.50%	1/10W
R374	1-216-647-11	METAL CHIP	680	0.50%	1/10W
R375	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W
R376	1-216-111-91	METAL GLAZE	390K	5%	1/10W
R378	1-216-114-00	METAL GLAZE	510K	5%	1/10W
R379	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W
R380	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R381	1-216-689-11	METAL GLAZE	39K	5%	1/10W
R382	1-216-101-00	METAL GLAZE	150K	5%	1/10W
R383	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W
R384	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R385	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R386	1-216-091-00	METAL GLAZE	56K	5%	1/10W
R387	1-216-029-00	METAL GLAZE	150	5%	1/10W
R388	1-216-039-00	METAL GLAZE	390	5%	1/10W

REF. NO.	PART NO.	DESCRIPTION			REMARK	
R389	1-216-649-11	METAL CHIP	820	0.50%	1/10W	
R390	1-249-393-11	CARBON	10	5%	1/4W	F
R391	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R393	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R394	1-216-083-00	METAL GLAZE	27K	5%	1/10W	
R395	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R396	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R397	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R398	1-216-105-91	METAL GLAZE	220K	5%	1/10W	
R399	1-216-111-91	METAL GLAZE	390K	5%	1/10W	
R400	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R401	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R402	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R403	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R404	1-216-029-00	METAL GLAZE	150	5%	1/10W	
R406	1-216-083-00	METAL GLAZE	27K	5%	1/10W	
R407	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
					(14M2U/E/A)	
R407	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
					(14M4U/E/A)	
R408	1-216-689-11	METAL CHIP	39K	0.50%	1/10W	
R410	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R411	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R412	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R413	1-216-668-11	METAL CHIP	5.1K	0.50%	1/10W	
R414	1-216-662-11	METAL CHIP	3K	0.50%	1/10W	
					(14M2U/E/A)	
R416	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R417	1-216-665-11	METAL CHIP	3.9K	0.50%	1/10W	
R418	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R419	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R420	1-216-689-11	METAL GLAZE	39K	5%	1/10W	
R422	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R423	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R424	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R425	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R426	1-216-039-00	METAL GLAZE	390	5%	1/10W	
R427	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R428	1-216-097-91	METAL GLAZE	100K	5%	1/10W	
R429	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R430	1-216-119-00	METAL GLAZE	820K	5%	1/10W	
R431	1-216-097-91	METAL GLAZE	100K	5%	1/10W	
R432	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R434	1-216-109-00	METAL GLAZE	330K	5%	1/10W	
R435	1-216-105-91	METAL GLAZE	220K	5%	1/10W	
R436	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R437	1-216-097-91	METAL GLAZE	100K	5%	1/10W	
R438	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R439	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R440	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R441	1-216-645-11	METAL CHIP	560	0.50%	1/10W	
R442	1-216-647-11	METAL CHIP	680	0.50%	1/10W	
R443	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R444	1-216-105-91	METAL GLAZE	220K	5%	1/10W	
R445	1-216-095-00	METAL GLAZE	82K	5%	1/10W	
R447	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R448	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R449	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R450	1-216-121-91	METAL GLAZE	1M	5%	1/10W	
R451	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R452	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R453	1-216-097-91	METAL GLAZE	100K	5%	1/10W	
R455	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R456	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R457	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R458	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R459	1-216-649-11	METAL CHIP	820	0.50%	1/10W	
R460	1-216-295-91	CONDUCTOR, CHIP				
R462	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R463	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	

REF. NO.	PART NO.	DESCRIPTION			REMARK	
R464	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R465	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R466	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R467	1-216-121-91	METAL GLAZE	1M	5%	1/10W	
R468	1-216-105-91	METAL GLAZE	220K	5%	1/10W	
R469	1-216-063-91	METAL GLAZE	3.9K	5%	1/10W	
R470	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R471	1-216-109-00	METAL GLAZE	330K	5%	1/10W	
R472	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R473	1-216-121-91	METAL GLAZE	1M	5%	1/10W	
R474	1-216-649-11	METAL CHIP	820	0.50%	1/10W	
R475	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R476	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R477	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R478	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R479	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R480	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R481	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R482	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R483	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R484	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R485	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R486	1-216-681-11	METAL CHIP	18K	0.50%	1/10W	
R487	1-216-653-11	METAL CHIP	1.2K	0.50%	1/10W	
R488	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R489	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R490	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R491	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R492	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R493	1-216-295-91	CONDUCTOR, CHIP				
R494	1-216-696-11	METAL CHIP	75K	0.50%	1/10W	
R495	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R496	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R497	1-216-653-11	METAL CHIP	1.2K	0.50%	1/10W	
R498	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R499	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R500	1-216-689-11	METAL GLAZE	39K	5%	1/10W	
R501	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R502	1-216-677-11	METAL CHIP	12K	0.50%	1/10W	
R503	1-216-677-11	METAL CHIP	12K	0.50%	1/10W	
R504	1-216-111-91	METAL GLAZE	390K	5%	1/10W	
R505	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R506	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R507	1-216-083-00	METAL GLAZE	27K	5%	1/10W	
R508	1-216-105-91	METAL GLAZE	220K	5%	1/10W	
R509	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R510	1-216-097-91	METAL GLAZE	100K	5%	1/10W	
R511	1-216-099-00	METAL GLAZE	120K	5%	1/10W	
R512	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W	
R513	1-216-295-91	CONDUCTOR, CHIP				
R514	1-216-295-91	CONDUCTOR, CHIP				
R515	1-216-675-11	METAL CHIP	10K	0.50%	1/10W	
R516	1-216-103-00	METAL GLAZE	180K	5%	1/10W	
R517	1-214-888-00	METAL	10K	1%	1/2W	
R518	1-260-123-11	CARBON	100K	5%	1/2W	
R519	1-216-017-91	METAL GLAZE	47	5%	1/10W	
R520	1-249-423-11	CARBON	3.3K	5%	1/4W	F
R521	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R523	1-215-892-11	METAL OXIDE	1K	5%	2W	F
R524	1-216-093-00	METAL GLAZE	68K	5%	1/10W	
R525	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R526	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R527	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R528	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R529	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R530	1-216-367-11	METAL OXIDE	0.68	5%	2W	F
R531	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R532	1-215-920-11	METAL OXIDE	3.3K	5%	3W	F
R533	1-247-723-71	CARBON	6.8K	5%	1/4W	F

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REF. NO.	PART NO.	DESCRIPTION			REMARK	
R534	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R535	1-249-448-11	CARBON	1.2	5%	1/4W	F
R536	1-216-101-00	METAL GLAZE	150K	5%	1/10W	
R537	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R539	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R540	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R541	1-249-383-11	CARBON	1.5	5%	1/4W	F
R542	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R543	1-212-883-00	FUSIBLE	120	5%	1/4W	F
R544	1-216-095-00	METAL GLAZE	82K	5%	1/10W	
R545	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R546	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R547	1-216-091-00	METAL GLAZE	56K	5%	1/10W	
R548	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R549	1-216-677-11	METAL CHIP	12K	0.50%	1/10W	
R550	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R551	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R552	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R553	1-216-083-00	METAL GLAZE	27K	5%	1/10W	
R554	1-216-095-00	METAL GLAZE	82K	5%	1/10W	
R555	1-216-692-11	METAL CHIP	51K	0.50%	1/10W	
R556	1-216-463-00	METAL OXIDE	12K	5%	2W	F
R558	1-215-868-00	METAL OXIDE	680	5%	1W	F
R559	1-216-105-91	METAL GLAZE	220K	5%	1/10W (14M2U/E/A)	
R559	1-216-109-00	METAL GLAZE	330K	5%	1/10W (14M4U/E/A)	
R560	1-216-091-00	METAL GLAZE	56K	5%	1/10W	
R561	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R562	1-247-696-11	CARBON	47	5%	1/4W (14M4U/E/A)	F
R563	1-216-017-91	METAL GLAZE	47	5%	1/10W	
R564	1-216-107-00	METAL GLAZE	270K	5%	1/10W	
R565	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R566	1-216-685-11	METAL CHIP	27K	0.50%	1/10W (14M2U/E/A)	
R566	1-216-691-11	METAL CHIP	47K	0.50%	1/10W (14M4U/E/A)	
R567	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R568	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R569	1-260-114-11	CARBON	18K	5%	1/2W	
R571	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R572	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R573	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W	
R574	1-216-089-91	METAL GLAZE	47K	5%	1/10W (14M4U/E/A)	
R575	1-249-383-11	CARBON	1.5	5%	1/4W	F
R576	1-216-101-00	METAL GLAZE	150K	5%	1/10W	
R577	1-216-073-00	METAL GLAZE	10K	5%	1/10W (14M4U/E/A)	
R578	1-216-693-11	METAL CHIP	56K	0.50%	1/10W	
R580	1-216-105-91	METAL GLAZE	220K	5%	1/10W	
R581	1-216-049-91	METAL GLAZE	1K	5%	1/10W (14M4U/E/A)	
R582	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R583	1-216-039-00	METAL GLAZE	390	5%	1/10W	
R584	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W	
R585	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R586	1-216-686-11	METAL CHIP	30K	0.50%	1/10W	
R587	1-216-675-11	METAL CHIP	10K	0.50%	1/10W	
R588	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R589	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R590	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R591	1-216-683-11	METAL CHIP	22K	0.50%	1/10W	
R592	1-247-688-11	CARBON	10	5%	1/4W	F
R593	1-216-647-11	METAL CHIP	680	0.50%	1/10W	
R594	1-260-104-91	CARBON	2.7K	5%	1/2W	
R595	1-216-689-11	METAL GLAZE	39K	5%	1/10W	
R596	1-214-754-00	METAL	11K	1%	1/4W	
R597	1-249-417-11	CARBON	1K	5%	1/4W	F
R598	1-216-085-00	METAL GLAZE	33K	5%	1/10W	

REF. NO.	PART NO.	DESCRIPTION			REMARK
R599	1-216-645-11	METAL CHIP	560	0.50%	1/10W
R1103	1-216-077-00	METAL GLAZE	15K	5%	1/10W
R1104	1-216-699-11	METAL CHIP	100K	0.50%	1/10W
R1105	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R1106	1-216-097-91	METAL GLAZE	100K	5%	1/10W
R1107	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W
R1108	1-216-681-11	METAL CHIP	18K	0.50%	1/10W
R1111	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R1112	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R1113	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R1114	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R1115	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R1116	1-216-677-11	METAL CHIP	12K	0.50%	1/10W
R1117	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W
R1118	1-216-113-00	METAL GLAZE	470K	5%	1/10W
R1119	1-216-694-11	METAL CHIP	62K	0.50%	1/10W
R1120	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R1123	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W
R1124	1-216-113-00	METAL GLAZE	470K	5%	1/10W
R1125	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R1126	1-216-041-00	METAL GLAZE	470	5%	1/10W
R1128	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R1129	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W
R1130	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R1131	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R1132	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W
R1133	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W
R1134	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R1136	1-216-097-91	METAL GLAZE	100K	5%	1/10W
R1137	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R1138	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R1139	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W
R1140	1-216-653-11	METAL CHIP	1.2K	0.50%	1/10W
R1141	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R1142	1-216-653-11	METAL CHIP	1.2K	0.50%	1/10W
R1143	1-216-653-11	METAL CHIP	1.2K	0.50%	1/10W
R1144	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R1145	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W
R1146	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R1147	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R1150	1-216-037-00	METAL GLAZE	330	5%	1/10W
R1151	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R1155	1-216-133-00	METAL GLAZE	3.3M	5%	1/10W
R1161	1-218-776-11	METAL CHIP	1M	0.50%	1/10W
R1162	1-218-768-11	METAL CHIP	470K	0.50%	1/10W
R1163	1-216-033-00	METAL GLAZE	220	5%	1/10W
R1164	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R1165	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R1167	1-216-097-91	METAL GLAZE	100K	5%	1/10W
R1168	1-216-097-91	METAL GLAZE	100K	5%	1/10W
R1169	1-216-097-91	METAL GLAZE	100K	5%	1/10W
R1170	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R1171	1-216-085-00	METAL GLAZE	33K	5%	1/10W
R1172	1-216-085-00	METAL GLAZE	33K	5%	1/10W
R1173	1-216-295-91	CONDUCTOR, CHIP			
R1174	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R1177	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W
R1179	1-216-041-00	METAL GLAZE	470	5%	1/10W
R1180	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R1182	1-216-131-11	METAL GLAZE	2.7M	5%	1/10W
R1183	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W
R1184	1-216-131-11	METAL GLAZE	2.7M	5%	1/10W
R1185	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W
R1186	1-216-131-11	METAL GLAZE	2.7M	5%	1/10W
R1187	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W
R1188	1-216-131-11	METAL GLAZE	2.7M	5%	1/10W
R1189	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W
R1190	1-216-131-11	METAL GLAZE	2.7M	5%	1/10W
R1191	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W

REF. NO.	PART NO.	DESCRIPTION			REMARK	
R1192	1-216-131-11	METAL GLAZE	2.7M	5%	1/10W	
R1193	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R1194	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R1195	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R1196	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R1197	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R1198	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R1301	1-216-029-00	METAL GLAZE	150	5%	1/10W	
R1302	1-216-029-00	METAL GLAZE	150	5%	1/10W	
R1303	1-216-039-00	METAL GLAZE	390	5%	1/10W	
R1304	1-216-689-11	METAL GLAZE	39K	5%	1/10W	
R1305	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R1306	1-216-645-11	METAL CHIP	560	0.50%	1/10W	
R1307	1-216-091-00	METAL GLAZE	56K	5%	1/10W	
R1308	1-216-645-11	METAL CHIP	560	0.50%	1/10W	
R1309	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R1311	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R1312	1-216-027-00	METAL GLAZE	120	5%	1/10W	
R1313	1-216-097-91	METAL GLAZE	100K	5%	1/10W	
R1314	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R1315	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R1316	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R1317	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R1318	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R1319	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R1320	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R1321	1-216-649-11	METAL CHIP	820	0.50%	1/10W	
R1322	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R1324	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R1325	1-216-652-11	METAL CHIP	1.1K	0.50%	1/10W	
R1326	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1327	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1328	1-216-125-00	METAL GLAZE	1.5M	5%	1/10W	
R1329	1-216-103-00	METAL GLAZE	180K	5%	1/10W	
R1330	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R1331	1-216-679-11	METAL CHIP	15K	0.50%	1/10W	
R1332	1-216-671-11	METAL CHIP	6.8K	0.50%	1/10W	
R1333	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R1334	1-216-063-91	METAL GLAZE	3.9K	5%	1/10W	
R1335	1-249-401-11	CARBON	47	5%	1/4W	F
R1336	1-216-095-00	METAL GLAZE	82K	5%	1/10W	
R1337	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R1338	1-216-647-11	METAL CHIP	680	0.50%	1/10W	
R1339	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R1340	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R1341	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R1342	1-216-083-00	METAL GLAZE	27K	5%	1/10W	
R1343	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R1344	1-216-093-00	METAL GLAZE	68K	5%	1/10W	
R1345	1-216-109-00	METAL GLAZE	330K	5%	1/10W	
R1346	1-216-097-91	METAL GLAZE	100K	5%	1/10W	
R1347	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1348	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W	
R1349	1-216-035-00	METAL GLAZE	270	5%	1/10W	
R1350	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1351	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R1352	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R1353	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R1354	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R1355	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R1356	1-216-105-91	METAL GLAZE	220K	5%	1/10W	
R1357	1-216-101-00	METAL GLAZE	150K	5%	1/10W	
R1358	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W	
R1359	1-216-099-00	METAL GLAZE	120K	5%	1/10W	
R1360	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R1361	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R1362	1-216-676-11	METAL CHIP	11K	0.50%	1/10W	
R1363	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R1364	1-216-073-00	METAL GLAZE	10K	5%	1/10W	

REF. NO.	PART NO.	DESCRIPTION			REMARK
R1365	1-216-131-11	METAL GLAZE	2.7M	5%	1/10W
R1366	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R1367	1-216-660-11	METAL CHIP	2.4K	0.50%	1/10W
R1368	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W
R1369	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W
R1370	1-216-105-91	METAL GLAZE	220K	5%	1/10W
R1371	1-216-113-00	METAL GLAZE	470K	5%	1/10W
R1372	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R1373	1-216-063-91	METAL GLAZE	3.9K	5%	1/10W
R1374	1-216-101-00	METAL GLAZE	150K	5%	1/10W
R1375	1-216-645-11	METAL CHIP	560	0.50%	1/10W
R1376	1-216-647-11	METAL CHIP	680	0.50%	1/10W
R1377	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W
R1378	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R1379	1-216-037-00	METAL GLAZE	330	5%	1/10W
R1380	1-216-645-11	METAL CHIP	560	0.50%	1/10W
R1381	1-216-647-11	METAL CHIP	680	0.50%	1/10W
R1382	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R1383	1-216-681-11	METAL CHIP	18K	0.50%	1/10W
R1384	1-216-091-00	METAL GLAZE	56K	5%	1/10W
R1385	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R1386	1-216-077-00	METAL GLAZE	15K	5%	1/10W
R1387	1-216-653-11	METAL CHIP	1.2K	0.50%	1/10W
R1388	1-216-689-11	METAL CHIP	39K	0.50%	1/10W
R1389	1-216-658-11	METAL CHIP	2K	0.50%	1/10W
R1390	1-216-647-11	METAL CHIP	680	0.50%	1/10W
R1391	1-216-025-91	METAL GLAZE	100	5%	1/10W
R1392	1-216-041-00	METAL GLAZE	470	5%	1/10W
R1393	1-216-063-91	METAL GLAZE	3.9K	5%	1/10W
R1394	1-216-041-00	METAL GLAZE	470	5%	1/10W
R1395	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W
R1396	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W
R1397	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R1399	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R1401	1-216-085-00	METAL GLAZE	33K	5%	1/10W
R1402	1-216-295-91	CONDUCTOR, CHIP			
R1403	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
R1404	1-216-681-11	METAL CHIP	18K	0.50%	1/10W
R1405	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W
R1406	1-216-653-11	METAL CHIP	1.2K	0.50%	1/10W
R1407	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W
R1408	1-216-113-00	METAL GLAZE	470K	5%	1/10W
R1409	1-216-295-91	CONDUCTOR, CHIP			
R1410	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W
R1411	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R1412	1-216-107-00	METAL GLAZE	270K	5%	1/10W
R1413	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R1414	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R1415	1-216-093-00	METAL GLAZE	68K	5%	1/10W
R1416	1-216-113-00	METAL GLAZE	470K	5%	1/10W
R1417	1-216-033-00	METAL GLAZE	220	5%	1/10W
R1418	1-216-033-00	METAL GLAZE	220	5%	1/10W
R1419	1-216-025-91	METAL GLAZE	100	5%	1/10W
R1420	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R1421	1-216-649-11	METAL CHIP	820	0.50%	1/10W
R1422	1-216-085-00	METAL GLAZE	33K	5%	1/10W
R1423	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R1424	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R1425	1-216-013-00	METAL GLAZE	33	5%	1/10W
R1426	1-216-113-00	METAL GLAZE	470K	5%	1/10W
R1427	1-216-681-11	METAL CHIP	18K	0.50%	1/10W
R1428	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W
R1429	1-216-668-11	METAL CHIP	5.1K	0.50%	1/10W
R1430	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R1431	1-216-129-00	METAL GLAZE	2.2M	5%	1/10W
R1432	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R1433	1-216-085-00	METAL GLAZE	33K	5%	1/10W
R1434	1-216-645-11	METAL CHIP	560	0.50%	1/10W
R1435	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W

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- The components identified by ⧗ in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

REF. NO.	PART NO.	DESCRIPTION			REMARK	
R1436	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1437	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R1438	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1439	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R1440	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R1441	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R1442	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1443	1-216-013-00	METAL GLAZE	33	5%	1/10W	
R1444	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R1445	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W	
R1446	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W	
R1447	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R1448	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R1449	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R1450	1-216-129-00	METAL GLAZE	2.2M	5%	1/10W	
R1451	1-216-093-00	METAL GLAZE	68K	5%	1/10W	
R1452	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R1453	1-216-013-00	METAL GLAZE	33	5%	1/10W	
R1454	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R1455	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R1456	1-216-129-00	METAL GLAZE	2.2M	5%	1/10W	
R1457	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R1458	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R1459	1-216-133-00	METAL GLAZE	3.3M	5%	1/10W	
R1460	1-216-097-91	METAL GLAZE	100K	5%	1/10W	
R1461	1-216-645-11	METAL CHIP	560	0.50%	1/10W	
R1462	1-216-645-11	METAL CHIP	560	0.50%	1/10W	
R1463	1-216-645-11	METAL CHIP	560	0.50%	1/10W	
R1464	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R1465	1-216-097-91	METAL GLAZE	100K	5%	1/10W	
R1466	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W	
R1467	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1468	1-216-091-00	METAL GLAZE	56K	5%	1/10W	
R1469	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R1470	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R1471	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R1472	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R1473	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R1475	1-216-677-11	METAL CHIP	12K	0.50%	1/10W	
R1476	1-216-063-91	METAL GLAZE	3.9K	5%	1/10W	
R1477	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R1478	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R1480	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R1481	1-216-115-00	METAL GLAZE	560K	5%	1/10W	
R1482	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R1483	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R1484	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R1485	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R1486	1-216-097-91	METAL GLAZE	100K	5%	1/10W	
R1487	1-216-097-91	METAL GLAZE	100K	5%	1/10W	
R1488	1-216-083-00	METAL GLAZE	27K	5%	1/10W	
R1489	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R1490	1-216-035-00	METAL GLAZE	270	5%	1/10W	
R1491	1-216-035-00	METAL GLAZE	270	5%	1/10W	
R1492	1-216-035-00	METAL GLAZE	270	5%	1/10W	
R1493	1-216-083-00	METAL GLAZE	27K	5%	1/10W	
R1494	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R1495	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R1496	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R1498	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R1499	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R1500	1-216-647-11	METAL CHIP	680	0.50%	1/10W	
R1501	1-216-075-00	METAL GLAZE	12K	5%	1/10W	
R1502	1-260-105-11	CARBON	3.3K	5%	1/2W	
R1503	1-216-063-91	METAL GLAZE	3.9K	5%	1/10W	
R1504	1-216-686-11	METAL CHIP	30K	0.50%	1/10W	
R1505	1-247-688-11	CARBON	10	5%	1/4W	F
R1506	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R1507	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R1508	1-216-083-00	METAL GLAZE	27K	5%	1/10W	
R1509	1-216-093-00	METAL GLAZE	68K	5%	1/10W	
R1510	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R1511	1-216-360-11	METAL OXIDE	8.2	5%	1W	F
R1512	1-216-647-11	METAL CHIP	680	0.50%	1/10W	
R1513	1-247-752-11	CARBON	1K	5%	1/2W	F
R1514	1-247-711-11	CARBON	680	5%	1/4W	F
R1515	1-216-350-11	METAL OXIDE	1.2	5%	1W	F
R1516	1-216-101-00	METAL GLAZE	150K	5%	1/10W	
R1517	1-216-109-00	METAL GLAZE	330K	5%	1/10W	
R1518	1-215-867-00	METAL OXIDE	470	5%	1W	F
R1519	1-216-355-11	METAL OXIDE	3.3	5%	1W	F
R1520	1-216-027-00	METAL GLAZE	120	5%	1/10W	
R1521	1-216-029-00	METAL GLAZE	150	5%	1/10W	
R1523	1-216-350-11	METAL OXIDE	1.2	5%	1W	F
R1524	1-216-427-00	METAL OXIDE	120	5%	1W	F
R1525	1-216-083-00	METAL GLAZE	27K	5%	1/10W	
R1526	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R1527	1-249-413-11	CARBON	470	5%	1/4W	F
R1528	1-215-869-11	METAL OXIDE	1K	5%	1W	F
R1529	1-202-829-11	SOLID	8.2K	20%	1/2W	
R1530	1-216-115-00	METAL GLAZE	560K	5%	1/10W	
R1531	1-247-697-11	CARBON	56	5%	1/4W	F
R1532	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R1533	1-249-414-11	CARBON	560	5%	1/4W	F
R1534	1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W	
⧗R1536 ⚠		METAL CHIP			1/10W	
R1537	1-249-389-11	CARBON	4.7	5%	1/4W	F
R1538	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1539	1-216-097-91	METAL GLAZE	100K	5%	1/10W (14M4U/E/A)	
R1540	1-216-105-91	METAL GLAZE	220K	5%	1/10W	
R1541	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R1542	1-247-692-71	CARBON	22	5%	1/4W (14M4U/E/A)	F
R1543	1-216-027-00	METAL GLAZE	120	5%	1/10W	
R1547	1-216-393-00	METAL OXIDE	2.2	5%	3W	F
R1548	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R1549	1-260-094-11	CARBON	390	5%	1/2W	
R1550	1-216-105-91	METAL GLAZE	220K	5%	1/10W	
R1551	1-249-393-11	CARBON	10	5%	1/4W	F
R1552	1-216-091-00	METAL GLAZE	56K	5%	1/10W	
R1553	1-216-091-00	METAL GLAZE	56K	5%	1/10W	
R1554	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R1555	1-216-295-91	CONDUCTOR, CHIP				
R1556	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W	
R1557	1-218-760-11	METAL CHIP	220K	0.50%	1/10W	
R1558	1-249-393-11	CARBON	10	5%	1/4W	F
R1559	1-249-393-11	CARBON	10	5%	1/4W	F
R1560	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R1567	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R1568	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R1569	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1570	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1571	1-216-103-00	METAL GLAZE	180K	5%	1/10W	
R1572	1-216-101-00	METAL GLAZE	150K	5%	1/10W	
R1573	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1574	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R1575	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R1576	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R1577	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R1578	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R1579	1-216-689-11	METAL CHIP	39K	0.50%	1/10W	
R1580	1-216-089-91	METAL GLAZE	47K	5%	1/10W (14M4U/E/A)	
R1581	1-208-612-11	METAL OXIDE	10M	5%	1W (14M4U/E/A)	
R1582	1-208-610-11	METAL OXIDE	2M	5%	1W (14M4U/E/A)	
R1583	1-212-998-00	FUSIBLE	470	5%	1/2W (14M4U/E/A)	F

REF. NO.	PART NO.	DESCRIPTION			REMARK	
R1589	1-216-387-11	METAL OXIDE	0.68	5%	3W	F
R1595	1-216-101-00	METAL GLAZE	150K	5%	1/10W	
R1596	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1597	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1598	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R1599	1-202-830-00	SOLID	10K	20%	1/2W (14M4U/E/A)	
R2300	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R2301	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R2302	1-216-671-11	METAL CHIP	6.8K	0.50%	1/10W	
R2303	1-216-093-00	METAL GLAZE	68K	5%	1/10W	
R2304	1-216-105-91	METAL GLAZE	220K	5%	1/10W	
R2305	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R2306	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R2307	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R2308	1-216-103-00	METAL GLAZE	180K	5%	1/10W	
R2309	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R2310	1-216-095-00	METAL GLAZE	82K	5%	1/10W	
R2311	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R2312	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R2313	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R2314	1-216-645-11	METAL CHIP	560	0.50%	1/10W	
R2315	1-216-679-11	METAL CHIP	15K	0.50%	1/10W	
R2316	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R2317	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R2318	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R2319	1-216-093-00	METAL GLAZE	68K	5%	1/10W	
R2320	1-216-677-11	METAL CHIP	12K	0.50%	1/10W	
R2321	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R2322	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R2323	1-216-683-11	METAL CHIP	22K	0.50%	1/10W	
R2324	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R2325	1-216-063-91	METAL GLAZE	3.9K	5%	1/10W	
R2326	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R2327	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R2328	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R2329	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R2330	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R2331	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R2332	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R2333	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R2334	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R2335	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R2336	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R2337	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R2338	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R2339	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R2340	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R2341	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R2342	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W	
R2343	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R2344	1-216-121-91	METAL GLAZE	1M	5%	1/10W	
R2345	1-216-681-11	METAL CHIP	18K	0.50%	1/10W	
R2346	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R2347	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R2348	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R2349	1-216-679-11	METAL CHIP	15K	0.50%	1/10W	
R2350	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R2351	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R2352	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R2353	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R2354	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R2357	1-216-091-00	METAL GLAZE	56K	5%	1/10W	
R2358	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R2361	1-216-099-00	METAL GLAZE	120K	5%	1/10W	
R2362	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R2363	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R2364	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R2365	1-216-687-11	METAL CHIP	33K	0.50%	1/10W	
R2366	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R2367	1-216-099-00	METAL GLAZE	120K	5%	1/10W	
R2368	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R2369	1-216-675-11	METAL CHIP	10K	0.50%	1/10W	
R2371	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R2372	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R2374	1-216-097-91	METAL GLAZE	100K	5%	1/10W	
R2375	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R2376	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R2377	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R2378	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R2379	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R2380	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R2381	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R2382	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R2383	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R2384	1-216-689-11	METAL GLAZE	39K	5%	1/10W	
R2385	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R2386	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R2387	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R2388	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R2389	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R2390	1-216-647-11	METAL CHIP	680	0.50%	1/10W	
R2391	1-216-647-11	METAL CHIP	680	0.50%	1/10W	
R2392	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R2393	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R2394	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R2396	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R2397	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R2398	1-216-109-00	METAL GLAZE	330K	5%	1/10W	
R2399	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R2501	1-216-083-00	METAL GLAZE	27K	5%	1/10W	
R2502	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R2503	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R2504	1-216-097-91	METAL GLAZE	100K	5%	1/10W (14M2U/E/A)	
R2504	1-216-101-00	METAL GLAZE	150K	5%	1/10W (14M4U/E/A)	
R2551	1-216-091-00	METAL GLAZE	56K	5%	1/10W	
R2552	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R2553	1-216-083-00	METAL GLAZE	27K	5%	1/10W	
R2555	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W	
R2556	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W	
R2557	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R2558	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R2559	1-216-039-00	METAL GLAZE	390	5%	1/10W	
R2560	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R2561	1-216-001-00	METAL GLAZE	10	5%	1/10W	
R2562	1-216-001-00	METAL GLAZE	10	5%	1/10W	
R2563	1-249-421-11	CARBON	2.2K	5%	1/4W	
R3301	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R3302	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R3303	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R3304	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R3305	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R3306	1-216-063-91	METAL GLAZE	3.9K	5%	1/10W	
R3308	1-216-097-91	METAL GLAZE	100K	5%	1/10W	
R3309	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R3310	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R3311	1-216-091-00	METAL GLAZE	56K	5%	1/10W	
R3312	1-216-105-91	METAL GLAZE	220K	5%	1/10W	
R3317	1-216-675-11	METAL CHIP	10K	0.50%	1/10W	
R3320	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R3323	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R3333	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R3334	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R3335	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R3337	1-216-099-00	METAL GLAZE	120K	5%	1/10W	
R3338	1-216-103-00	METAL GLAZE	180K	5%	1/10W	
R3339	1-216-093-00	METAL GLAZE	68K	5%	1/10W	

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

The componants identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

A **G**

REF. NO.	PART NO.	DESCRIPTION			REMARK
R3340	1-216-099-00	METAL GLAZE	120K	5%	1/10W
R3344	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R3345	1-216-033-00	METAL GLAZE	220	5%	1/10W
R3346	1-216-025-91	METAL GLAZE	100	5%	1/10W
R3347	1-216-025-91	METAL GLAZE	100	5%	1/10W
R3348	1-216-025-91	METAL GLAZE	100	5%	1/10W
R3349	1-216-025-91	METAL GLAZE	100	5%	1/10W
R3350	1-216-113-00	METAL GLAZE	470K	5%	1/10W
R3351	1-216-119-00	METAL GLAZE	820K	5%	1/10W
R3355	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R3356	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W
R3357	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W
R3358	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W
R3359	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R3360	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R3361	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R3362	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R3363	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R3364	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R3376	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R3377	1-216-107-00	METAL GLAZE	270K	5%	1/10W
R3378	1-216-115-00	METAL GLAZE	560K	5%	1/10W
R3381	1-216-041-00	METAL GLAZE	470	5%	1/10W
R3382	1-216-645-11	METAL CHIP	560	0.50%	1/10W
R3383	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W
R3384	1-216-063-91	METAL GLAZE	3.9K	5%	1/10W
R3385	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R3386	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R3390	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R3394	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R3395	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R3396	1-216-041-00	METAL GLAZE	470	5%	1/10W
R3398	1-216-685-11	METAL CHIP	27K	0.50%	1/10W
R4401	1-216-085-00	METAL GLAZE	33K	5%	1/10W
R4402	1-216-113-00	METAL GLAZE	470K	5%	1/10W
R4404	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R4405	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W
R4407	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W
R4408	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W
R4409	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W
R4410	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W
R4411	1-216-113-00	METAL GLAZE	470K	5%	1/10W
R4412	1-216-113-00	METAL GLAZE	470K	5%	1/10W
R4413	1-216-295-91	CONDUCTOR, CHIP			
R4414	1-216-295-91	CONDUCTOR, CHIP			
R4415	1-216-295-91	CONDUCTOR, CHIP			
R4416	1-216-295-91	CONDUCTOR, CHIP			
		<VARIABLE RESISTOR>			
RV501	1-223-102-00	RES, ADJ, WIREWOUND 120			
		<TRANSFORMER>			
T300	1-406-781-11	COIL			
T500	1-426-668-11	TRANSFORMER, FERRITE (HDT)			
T501	⚠ 1-453-233-11	TRANSFORMER ASSY, FLYBACK			(14M4U/E/A)
T501	⚠ 1-453-232-11	TRANSFORMER ASSY, FLYBACK			(14M2U/E/A)
T501	* 4-058-301-01	RING, SHORT			
T501	7-685-663-79	SCREW +BVTP 4X16 TYPE2 IT-3			
T502	1-413-059-00	TRANSFORMER, FERRITE (DFT)			(14M4U/E/A)
		<THERMISTOR>			
TH500	1-807-970-11	THERMISTOR			

REF. NO.	PART NO.	DESCRIPTION			REMARK
		<TEST PIN>			
TP300	* 1-535-877-22	CHIP, CHECKER			
TP301	* 1-535-877-22	CHIP, CHECKER			
TP305	* 1-535-877-22	CHIP, CHECKER			
TP306	* 1-535-877-22	CHIP, CHECKER			
TP307	* 1-535-877-22	CHIP, CHECKER			
TP311	* 1-535-877-22	CHIP, CHECKER			
TP312	* 1-535-877-22	CHIP, CHECKER			
TP401	* 1-535-877-22	CHIP, CHECKER			
TP402	* 1-535-877-22	CHIP, CHECKER			
TP403	* 1-535-877-22	CHIP, CHECKER			
TP501	* 1-535-877-22	CHIP, CHECKER			
TP502	* 1-535-877-22	CHIP, CHECKER			
TP503	* 1-535-877-22	CHIP, CHECKER			
TP504	* 1-535-877-22	CHIP, CHECKER			
		<CRYSTAL>			
X101	1-579-175-11	VIBRATOR, CERAMIC			
X300	1-577-259-11	VIBRATOR, CRYSTAL			
X300	3-741-396-01	INSULATOR			
X301	1-527-722-00	VIBRATOR, CRYSTAL			
X301	3-741-396-01	INSULATOR			

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	* A-1316-302-A	G BOARD, COMPLETE			
	1-533-223-11	HOLDER, FUSE			
	* 4-374-846-11	COVER, CAPACITOR, CAP TYPE			
	4-382-854-11	SCREW (M3X10), P, SW (+)			
	7-322-065-19	RUBBER, SILICON RTV (KE490W)			
		<CAPACITOR>			
C602	1-130-711-00	FILM	0.22MF	20%	250V
C603	1-130-711-00	FILM	0.22MF	20%	250V
C604	1-113-924-11	CERAMIC	0.0047MF	20%	250V
C605	1-113-924-11	CERAMIC	0.0047MF	20%	250V
C606	1-113-924-11	CERAMIC	0.0047MF	20%	250V
C607	1-113-924-11	CERAMIC	0.0047MF	20%	250V
C608	1-113-924-11	CERAMIC	0.0047MF	20%	250V
C609	1-113-924-11	CERAMIC	0.0047MF	20%	250V
C610	1-113-924-11	CERAMIC	0.0047MF	20%	250V
C611	1-113-924-11	CERAMIC	0.0047MF	20%	250V
C612	1-137-484-11	FILM	0.47MF	10%	630V
C613	1-137-484-11	FILM	0.47MF	10%	630V
C614	1-129-718-00	FILM	0.022MF	10%	630V
C615	1-136-619-11	FILM	0.0016MF	3%	2KV
C616	1-107-909-11	ELECT	47MF	20%	35V
C617	1-107-430-91	CERAMIC	0.0033MF	10%	1KV
C618	1-107-906-11	ELECT	10MF	20%	50V
C619	1-107-911-11	ELECT	220MF	20%	50V
C621	1-117-791-11	ELECT	1000MF	20%	160V
C622	1-102-038-00	CERAMIC	0.001MF		500V
C623	1-107-900-51	ELECT	4700MF	20%	35V
C624	1-102-038-00	CERAMIC	0.001MF		500V
C625	1-107-900-51	ELECT	4700MF	20%	35V
C626	1-102-038-00	CERAMIC	0.001MF		500V
C627	1-107-900-51	ELECT	4700MF	20%	35V
C628	1-102-038-00	CERAMIC	0.001MF		500V
C629	1-107-891-11	ELECT	3300MF	20%	25V
C630	1-126-964-11	ELECT	10MF	20%	50V
C631	1-136-853-11	FILM	0.56MF	5%	200V
C632	1-107-492-11	ELECT	47MF	20%	160V
C633	1-107-885-11	ELECT	3300MF	20%	16V
C634	1-107-911-11	ELECT	220MF	20%	50V
C636	1-107-909-11	ELECT	47MF	20%	50V
C637	1-107-910-11	ELECT	100MF	20%	50V

REF. NO.	PART NO.	DESCRIPTION	REMARK
C638	1-137-484-11	FILM 0.47MF 10% 630V	
C2601	1-102-038-00	CERAMIC 0.001MF 500V	
		<CONNECTOR>	
CN601	*1-580-689-11	PIN, CONNECTOR (PC BOARD) 4P	
CN602	*1-695-561-11	PIN, CONNECTOR (PC BOARD) 7P	
CN603	*1-508-765-00	PIN, CONNECTOR (5mm PITCH) 3P	
CN605	*1-573-964-11	PIN, CONNECTOR (PC BOARD) 6P	
CN606	*1-564-506-11	PLUG, CONNECTOR 3P	
CN607	*1-564-509-11	PLUG, CONNECTOR 6P	
CN609	1-508-786-00	PIN, CONNECTOR (5mm PITCH) 2P	
		<DIODE>	
D601	8-719-510-53	DIODE D4SB60L	
D605	8-719-979-85	DIODE EGP20G	
D606	8-719-988-55	DIODE RGP15K-6179	
D607	8-719-300-33	DIODE RU-3AM	
D608	8-719-911-19	DIODE 1SS119-25	
D609	8-719-300-33	DIODE RU-3AM	
D610	8-719-029-04	DIODE D5L60	
D612	8-719-045-48	DIODE FML-G12S	
D613	8-719-979-85	DIODE EGP20G	
D614	8-719-045-48	DIODE FML-G12S	
D615	8-719-979-85	DIODE EGP20G	
D616	8-719-054-32	DIODE ERA15-06	
D617	8-719-110-44	DIODE RD16ESB1	
D618	8-719-979-85	DIODE EGP20G	
		<FERRITE BEAD>	
FB601	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH	
FB602	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH	
FB603	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH	
FB604	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH	
FB605	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH	
FB606	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH	
FB607	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH	
FB608	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH	
FB609	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH	
FB610	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH	
FB611	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH	
FB612	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH	
FB613	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH	
		<IC>	
IC601	4-058-250-01	SHEET, INSULATING	
IC601	8-749-925-03	IC STR-M6524	
IC602	8-749-010-47	IC STR-S3115	
IC603	8-759-701-56	IC NJM78M05FA	
IC604	8-759-231-53	IC TA7805S	
IC605	8-759-231-58	IC TA7812S	
		<COIL>	
L601	1-411-215-11	COIL, CHOKE 200UH	
L1601	1-410-679-31	INDUCTOR 270UH	
L1602	1-421-421-00	COIL, CHOKE	
L2601	1-459-155-00	COIL (WITH CORE) 45UH	
		<PHOTO COUPLER>	
PH601	8-749-923-50	PHOTO COUPLER PC111YS	
		<TRANSISTOR>	
Q601	8-729-140-96	TRANSISTOR 2SD774-34	

REF. NO.	PART NO.	DESCRIPTION	REMARK
Q603	8-729-303-61	TRANSISTOR 2SC3851-G	
		<RESISTOR>	
R601	1-202-719-00	SOLID 1M 20% 1/2W	
R602	1-216-491-11	METAL OXIDE 56K 5% 3W	F
R603	1-216-490-11	METAL OXIDE 39K 5% 3W	F
R604	1-249-418-11	CARBON 1.2K 5% 1/4W	
R605	1-249-415-11	CARBON 680 5% 1/4W	
R606	1-207-642-00	WIREWOUND 0.15 10% 3W	F
R607	1-249-426-11	CARBON 5.6K 5% 1/4W	
R608	1-249-428-11	CARBON 8.2K 5% 1/4W	
R609	1-249-428-11	CARBON 8.2K 5% 1/4W	
R610	1-249-428-11	CARBON 8.2K 5% 1/4W	
R611	1-249-417-11	CARBON 1K 5% 1/4W	F
R612	1-249-404-00	CARBON 82 5% 1/4W	
R613	1-249-419-11	CARBON 1.5K 5% 1/4W	
R614	1-249-385-11	CARBON 2.2 5% 1/4W	F
R615	1-202-727-00	SOLID 4.7M 10% 1/2W	
R617	1-202-933-61	FUSIBLE 0.1 10% 1/2W	F
R618	1-202-933-61	FUSIBLE 0.1 10% 1/2W	F
R619	1-202-933-61	FUSIBLE 0.1 10% 1/2W	F
R620	1-202-933-61	FUSIBLE 0.1 10% 1/2W	F
R621	1-215-877-11	METAL OXIDE 22K 5% 1W	F
R622	1-249-401-11	CARBON 47 5% 1/4W	F
R623	1-249-417-11	CARBON 1K 5% 1/4W	
R626	1-247-895-91	CARBON 470K 5% 1/4W	
R627	1-216-490-11	METAL OXIDE 39K 5% 3W	F
R628	1-216-491-11	METAL OXIDE 56K 5% 3W	F
R629	1-202-727-00	SOLID 4.7M 10% 1/2W	
R630	1-216-490-11	METAL OXIDE 39K 5% 3W	F
R631	1-249-412-11	CARBON 390 5% 1/4W	F
R632	1-249-401-11	CARBON 47 5% 1/4W	F
R1602	1-202-842-11	SOLID 220K 20% 1/2W	
R1603	1-202-842-11	SOLID 220K 20% 1/2W	
		<RELAY>	
RY601	1-515-738-11	RELAY	
		<TRANSFORMER>	
T601	1-426-716-11	TRANSFORMER, LINE FILTER (LFT)	
T602	1-426-716-11	TRANSFORMER, LINE FILTER (LFT)	
T603	1-431-245-11	TRANSFORMER, CONVERTER (SRT)	
		<THERMISTOR>	
THP601	1-808-059-31	THERMISTOR, POSITIVE	
		<TEST PIN>	
TP1601	1-536-354-00	POST PIN	
		<VARISTOR>	
VDR601	1-809-942-71	VARISTOR	
VDR602	1-809-942-71	VARISTOR	

****

C

REF. NO.	PART NO.	DESCRIPTION				REMARK
	* A-1331-627-A	C BOARD, COMPLETE **********************				(PVM-14M4U/E/A)
	* A-1331-631-A	C BOARD, COMPLETE **********************				(PVM-14M2U/E/A)
	7-682-949-01	SCREW +PSW 3X10				

<CAPACITOR>

REF. NO.	PART NO.	DESCRIPTION				REMARK
C701	1-102-157-00	CERAMIC	560PF	10%	500V	
C702	1-102-157-00	CERAMIC	560PF	10%	500V	
C703	1-102-157-00	CERAMIC	560PF	10%	500V	
C704	1-102-121-00	CERAMIC	0.0022MF	10%	50V	
C705	1-104-665-11	ELECT	100MF	20%	16V	
C706	1-102-074-00	CERAMIC	0.001MF	10%	50V	
C707	1-162-116-00	CERAMIC	680PF	10%	2KV	
C708	1-136-601-11	FILM	0.01MF	5%	630V	
C710	1-101-880-00	CERAMIC	47PF	5%	50V	
C711	1-101-880-00	CERAMIC	47PF	5%	50V	
C712	1-101-880-00	CERAMIC	47PF	5%	50V	
C713	1-107-651-11	ELECT	4.7MF	20%	250V	
C714	1-102-976-00	CERAMIC	180PF	5%	50V	
C715	1-102-976-00	CERAMIC	180PF	5%	50V	
C716	1-102-976-00	CERAMIC	180PF	5%	50V	
C717	1-107-372-11	MYLAR	0.22MF	10%	200V	
C718	1-107-372-11	MYLAR	0.22MF	10%	200V	
C720	1-106-383-00	MYLAR	0.047MF	10%	200V	
C734	1-102-973-00	CERAMIC	100PF	5%	50V	
C735	1-102-816-00	CERAMIC	120PF	5%	50V	
C736	1-102-816-00	CERAMIC	120PF	5%	50V	
C740	1-162-114-00	CERAMIC	0.0047MF		2KV	(14M4U/E/A)

<CONNECTOR>

REF. NO.	PART NO.	DESCRIPTION	REMARK
CN701	* 1-564-511-11	PLUG, CONNECTOR 8P	
CN702	* 1-573-964-11	PIN, CONNECTOR (PC BOARD) 6P	
CN703	1-695-915-11	TAB (CONTACT)	
CN704	1-695-915-11	TAB (CONTACT) (14M4U/E/A)	

<DIODE>

REF. NO.	PART NO.	DESCRIPTION	REMARK
D701	8-719-911-19	DIODE 1SS119-25	
D702	8-719-911-19	DIODE 1SS119-25	
D703	8-719-911-19	DIODE 1SS119-25	
D704	8-719-911-19	DIODE 1SS119-25	
D705	8-719-911-19	DIODE 1SS119-25	
D706	8-719-911-19	DIODE 1SS119-25	
D707	8-719-901-83	DIODE 1SS83	
D708	8-719-901-83	DIODE 1SS83	
D709	8-719-901-83	DIODE 1SS83	
D713	8-719-901-83	DIODE 1SS83	
D715	8-719-901-83	DIODE 1SS83	
D716	8-719-901-83	DIODE 1SS83	
D717	8-719-901-83	DIODE 1SS83	

<JACK>

REF. NO.	PART NO.	DESCRIPTION	REMARK
J701	1-251-116-11	SOCKET, PICTURE TUBE (14M4U/E/A)	
J701	1-526-819-11	SOCKET, PICTURE TUBE (14M2U/E/A)	

<COIL>

REF. NO.	PART NO.	DESCRIPTION	REMARK
L701	1-410-667-31	INDUCTOR 22UH	
L705	1-412-532-11	INDUCTOR 39UH (14M2U/E/A)	
L705	1-412-534-31	INDUCTOR 56UH (14M4U/E/A)	

<TRANSISTOR>

REF. NO.	PART NO.	DESCRIPTION	REMARK
Q701	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q702	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q703	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q704	8-729-200-17	TRANSISTOR 2SA1091-O	
Q705	8-729-200-17	TRANSISTOR 2SA1091-O	
Q706	8-729-200-17	TRANSISTOR 2SA1091-O	
Q710	8-729-200-17	TRANSISTOR 2SA1091-O	
Q711	8-729-200-17	TRANSISTOR 2SA1091-O	
Q712	8-729-200-17	TRANSISTOR 2SA1091-O	
Q713	8-729-255-12	TRANSISTOR 2SC2551-O	
Q714	8-729-255-12	TRANSISTOR 2SC2551-O	
Q715	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q716	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q717	8-729-119-78	TRANSISTOR 2SC2785-HFE	

<RESISTOR>

REF. NO.	PART NO.	DESCRIPTION				REMARK
R702	1-247-903-00	CARBON	1M	5%	1/4W	
R704	1-215-405-00	METAL	220	1%	1/4W	
R705	1-215-405-00	METAL	220	1%	1/4W	
R706	1-215-405-00	METAL	220	1%	1/4W	
R707	1-249-431-11	CARBON	15K	5%	1/4W	
R708	1-249-431-11	CARBON	15K	5%	1/4W	
R709	1-249-431-11	CARBON	15K	5%	1/4W	
R710	1-215-391-00	METAL	56	1%	1/4W	
R711	1-215-394-00	METAL	75	1%	1/4W	
R712	1-215-392-00	METAL	62	1%	1/4W	
R715	1-202-818-00	SOLID	1K	20%	1/2W	
R716	1-216-486-00	METAL OXIDE	8.2K	5%	3W	F
R717	1-202-818-00	SOLID	1K	20%	1/2W	
R718	1-216-486-00	METAL OXIDE	8.2K	5%	3W	F
R719	1-202-818-00	SOLID	1K	20%	1/2W	
R720	1-216-486-00	METAL OXIDE	8.2K	5%	3W	F
R722	1-202-838-00	SOLID	100K	20%	1/2W	(14M4U/E/A)
R722	1-202-883-11	SOLID	680K	20%	1/2W	(14M2U/E/A)
R723	1-202-838-00	SOLID	100K	20%	1/2W	
R724	1-202-842-11	SOLID	220K	20%	1/2W	
R725	1-202-719-00	SOLID	1M	20%	1/2W	(14M2U/E/A)
R725	1-202-883-11	SOLID	680K	20%	1/2W	(14M4U/E/A)
R731	1-247-815-91	CARBON	220	5%	1/4W	
R732	1-247-815-91	CARBON	220	5%	1/4W	
R733	1-247-815-91	CARBON	220	5%	1/4W	
R734	1-249-409-11	CARBON	220	5%	1/4W	F
R735	1-249-409-11	CARBON	220	5%	1/4W	F
R736	1-249-409-11	CARBON	220	5%	1/4W	F
R737	1-247-807-31	CARBON	100	5%	1/4W	
R738	1-247-807-31	CARBON	100	5%	1/4W	
R739	1-247-807-31	CARBON	100	5%	1/4W	
R740	1-249-429-11	CARBON	10K	5%	1/4W	F
R741	1-249-429-11	CARBON	10K	5%	1/4W	F
R742	1-249-429-11	CARBON	10K	5%	1/4W	F
R744	1-249-429-11	CARBON	10K	5%	1/4W	
R745	1-249-429-11	CARBON	10K	5%	1/4W	
R746	1-215-879-11	METAL OXIDE	47K	5%	1W	F
R747	1-247-725-11	CARBON	10K	5%	1/4W	F
R748	1-249-923-11	CARBON	1K	5%	1/4W	F
R749	1-215-902-11	METAL OXIDE	47K	5%	2W	F
R750	1-249-400-11	CARBON	39	5%	1/4W	F
R751	1-247-887-00	CARBON	220K	5%	1/4W	
R752	1-247-887-00	CARBON	220K	5%	1/4W	
R753	1-247-887-00	CARBON	220K	5%	1/4W	

<VARIABLE RESISTOR>

REF. NO.	PART NO.	DESCRIPTION	REMARK
RV707	1-230-641-11	RES, ADJ, METAL GLAZE 2.2M	(14M2U/E/A)
RV708	1-230-619-11	RES, ADJ, METAL GLAZE 110M	(14M2U/E/A)

The componants identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

REF. NO.	PART NO.	DESCRIPTION	REMARK
RV708	1-241-714-11	RES, ADJ, METAL FILM 110M (14M4U/E/A)	
RV709	1-230-641-11	RES, ADJ, METAL GLAZE 2.2M	

<SPARK GAP>

REF. NO.	PART NO.	DESCRIPTION
SG701	1-519-422-11	GAP, SPARK (14M4U/E/A)
SG702	1-519-422-11	GAP, SPARK (14M4U/E/A)
SG703	1-519-422-11	GAP, SPARK (14M4U/E/A)
SG704	1-519-422-11	GAP, SPARK (14M4U/E/A)

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* A-1372-302-A H BOARD, COMPLETE

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* 4-348-208-00 HOLDER, LED

<CONNECTOR>

REF. NO.	PART NO.	DESCRIPTION
CN105	* 1-564-527-11	PLUG, CONNECTOR 12P
CN106	* 1-564-526-11	PLUG, CONNECTOR 11P

<DIODE>

REF. NO.	PART NO.	DESCRIPTION
D2102	8-719-920-05	DIODE SLP281C-50
D2103	8-719-812-32	DIODE TLY123
D2104	8-719-991-33	DIODE 1SS133T-77

<RESISTOR>

REF. NO.	PART NO.	DESCRIPTION			
R2101	1-249-419-11	CARBON	1.5K	5%	1/4W
R2107	1-249-430-11	CARBON	12K	5%	1/4W
R2136	1-249-414-11	CARBON	560	5%	1/4W
R2137	1-249-414-11	CARBON	560	5%	1/4W
R2138	1-249-414-11	CARBON	560	5%	1/4W
R2139	1-249-414-11	CARBON	560	5%	1/4W
R2140	1-249-414-11	CARBON	560	5%	1/4W
R2141	1-249-414-11	CARBON	560	5%	1/4W
R2142	1-249-414-11	CARBON	560	5%	1/4W
R2143	1-249-414-11	CARBON	560	5%	1/4W
R2144	1-249-414-11	CARBON	560	5%	1/4W
R2145	1-249-414-11	CARBON	560	5%	1/4W
R2147	1-215-427-00	METAL	1.8K	1%	1/4W
R2148	1-215-419-00	METAL	820	1%	1/4W
R2149	1-215-414-00	METAL	510	1%	1/4W
R2150	1-215-409-00	METAL	330	1%	1/4W
R2151	1-215-407-00	METAL	270	1%	1/4W
R2152	1-215-404-00	METAL	200	1%	1/4W
R2153	1-215-401-11	METAL	150	1%	1/4W
R2154	1-215-399-00	METAL	120	1%	1/4W
R2155	1-215-397-00	METAL	100	1%	1/4W
R2156	1-215-421-00	METAL	1K	1%	1/4W
R2157	1-215-416-00	METAL	620	1%	1/4W
R2158	1-215-410-00	METAL	360	1%	1/4W
R2159	1-215-405-00	METAL	220	1%	1/4W
R2160	1-215-421-00	METAL	1K	1%	1/4W

<VARIABLE RESISTOR>

REF. NO.	PART NO.	DESCRIPTION
RV2101	1-241-238-21	RES, VAR, CARBON 20K
RV2103	1-225-385-11	RES, VAR, CARBON 20K
RV2105	1-225-385-11	RES, VAR, CARBON 20K
RV2109	1-225-385-11	RES, VAR, CARBON 20K
RV2113	1-225-385-11	RES, VAR, CARBON 20K
RV2117	1-241-238-21	RES, VAR, CARBON 20K

<SWITCH>

REF. NO.	PART NO.	DESCRIPTION	REMARK
S2101	1-570-101-41	SWITCH, KEY BOARD	
S2102	1-570-101-41	SWITCH, KEY BOARD	
S2103	1-570-101-41	SWITCH, KEY BOARD	
S2104	1-570-101-41	SWITCH, KEY BOARD	
S2105	1-570-101-41	SWITCH, KEY BOARD	
S2106	1-570-969-11	SWITCH, KEY BOARD	
S2107	1-570-969-11	SWITCH, KEY BOARD	
S2108	1-570-101-41	SWITCH, KEY BOARD	
S2109	1-570-101-41	SWITCH, KEY BOARD	
S2110	1-570-101-41	SWITCH, KEY BOARD	
S2111	1-570-101-41	SWITCH, KEY BOARD	
S2112	1-570-101-41	SWITCH, KEY BOARD	
S2113	1-570-969-11	SWITCH, KEY BOARD	
S2114	1-570-969-11	SWITCH, KEY BOARD	

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* A-1388-193-A J BOARD, COMPLETE

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<CONNECTOR>

REF. NO.	PART NO.	DESCRIPTION
CN608	* 1-695-561-11	PIN, CONNECTOR (PC BOARD) 7P

<SWITCH>

REF. NO.	PART NO.	DESCRIPTION
S601	⚠ 1-692-921-11	SWITCH, PUSH (A.C. POWER)

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* A-1390-704-A X BOARD, COMPLETE

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<CONNECTOR>

REF. NO.	PART NO.	DESCRIPTION
CN108	* 1-564-518-11	PLUG, CONNECTOR 3P

<DIODE>

REF. NO.	PART NO.	DESCRIPTION
D001	8-719-023-78	DIODE SEL3810DLC05
D002	8-719-023-78	DIODE SEL3810DLC05
D003	8-719-023-78	DIODE SEL3810DLC05
D004	8-719-023-78	DIODE SEL3810DLC05

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* A-1390-705-A S BOARD, COMPLETE

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(PVM-14M2U/14M4U)

<CAPACITOR>

REF. NO.	PART NO.	DESCRIPTION			
C805	1-102-978-00	CERAMIC	220PF	5%	50V
C806	1-136-165-00	FILM	0.1MF	5%	50V
C807	1-130-477-00	MYLAR	0.0033MF	5%	50V
C810	1-136-165-00	FILM	0.1MF	5%	50V
C811	1-136-165-00	FILM	0.1MF	5%	50V
C812	1-136-495-11	FILM	0.068MF	5%	50V
C813	1-124-261-00	ELECT	10MF	20%	50V
C818	1-136-165-00	FILM	0.1MF	5%	50V

<CONNECTOR>

REF. NO.	PART NO.	DESCRIPTION
CN801	* 1-573-896-11	SOCKET, CONNECTOR 12P

<COIL>

REF. NO.	PART NO.	DESCRIPTION
L801	1-410-470-11	INDUCTOR 10UH

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

REF. NO.	PART NO.	DESCRIPTION			REMARK
		<RESISTOR>			
R802	1-249-435-11	CARBON	33K	5%	1/4W
R803	1-247-863-91	CARBON	22K	5%	1/4W
R804	1-215-454-00	METAL	24K	1%	1/4W
R805	1-215-461-00	METAL	47K	1%	1/4W
R808	1-249-417-11	CARBON	1K	5%	1/4W
R812	1-249-417-11	CARBON	1K	5%	1/4W
R813	1-249-417-11	CARBON	1K	5%	1/4W
R815	1-247-843-11	CARBON	3.3K	5%	1/4W
R816	1-249-418-11	CARBON	1.2K	5%	1/4W
R817	1-249-418-11	CARBON	1.2K	5%	1/4W
R818	1-249-418-11	CARBON	1.2K	5%	1/4W
R819	1-249-418-11	CARBON	1.2K	5%	1/4W
R820	1-249-422-11	CARBON	2.7K	5%	1/4W

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1-537-735-14 TERMINAL BOARD ASSY, I/O(A)
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(Q BOARD)

	2-990-241-02	HOLDER (A), PLUG
	3-178-213-21	SCREW +P 3X10
	7-685-135-19	SCREW +P 2.6X10 TYPE2 SLIT

		<CAPACITOR>			
C2401	1-163-111-00	CERAMIC CHIP	56PF	5%	50V
C2402	1-104-396-11	ELECT	10MF	20%	16V
C2403	1-104-396-11	ELECT	10MF	20%	16V
C2404	1-104-396-11	ELECT	10MF	20%	16V
C2405	1-124-589-11	ELECT	47MF	20%	16V
C2406	1-104-396-11	ELECT	10MF	20%	16V
C2407	1-104-396-11	ELECT	10MF	20%	16V
C2408	1-104-396-11	ELECT	10MF	20%	16V
C2409	1-124-234-00	ELECT	22MF	20%	16V
C2410	1-163-033-91	CERAMIC CHIP	0.022MF		50V
C2411	1-104-396-11	ELECT	10MF	20%	16V
C2412	1-104-396-11	ELECT	10MF	20%	16V
C2413	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C2414	1-126-301-11	ELECT	1MF	20%	50V
C2415	1-165-319-11	CERAMIC CHIP	0.1MF		50V
C2416	1-124-589-11	ELECT	47MF	20%	16V
C2418	1-163-033-91	CERAMIC CHIP	0.022MF		50V
C2422	1-124-234-00	ELECT	22MF	20%	16V
C2423	1-124-234-00	ELECT	22MF	20%	16V
C2424	1-163-033-91	CERAMIC CHIP	0.022MF		50V
C2425	1-124-589-11	ELECT	47MF	20%	16V
C2426	1-124-589-11	ELECT	47MF	20%	16V
C2427	1-124-234-00	ELECT	22MF	20%	16V
C2428	1-163-033-91	CERAMIC CHIP	0.022MF		50V
C2429	1-124-234-00	ELECT	22MF	20%	16V
C2430	1-163-033-91	CERAMIC CHIP	0.022MF		50V
C2431	1-124-234-00	ELECT	22MF	20%	16V
C2432	1-124-234-00	ELECT	22MF	20%	16V
C2433	1-163-033-91	CERAMIC CHIP	0.022MF		50V
C2434	1-124-463-00	ELECT	0.1MF	20%	50V
C2435	1-163-033-91	CERAMIC CHIP	0.022MF		50V
C2436	1-124-234-00	ELECT	22MF	20%	16V
C2437	1-163-033-91	CERAMIC CHIP	0.022MF		50V
C2438	1-124-234-00	ELECT	22MF	20%	16V
C2439	1-124-234-00	ELECT	22MF	20%	16V
C2440	1-163-033-91	CERAMIC CHIP	0.022MF		50V
C2441	1-124-234-00	ELECT	22MF	20%	16V
C2442	1-124-234-00	ELECT	22MF	20%	16V
C2443	1-124-234-00	ELECT	22MF	20%	16V
C2444	1-124-234-00	ELECT	22MF	20%	16V
C2445	1-163-033-91	CERAMIC CHIP	0.022MF		50V
C2446	1-163-033-91	CERAMIC CHIP	0.022MF		50V

REF. NO.	PART NO.	DESCRIPTION			REMARK
C2447	1-124-234-00	ELECT	22MF	20%	16V
C2448	1-124-234-00	ELECT	22MF	20%	16V
C2449	1-124-234-00	ELECT	22MF	20%	16V
C2450	1-124-234-00	ELECT	22MF	20%	16V
C2451	1-124-589-11	ELECT	47MF	20%	16V
C2452	1-124-589-11	ELECT	47MF	20%	16V
C2454	1-126-163-11	ELECT	4.7MF	20%	25V
C2461	1-165-319-11	CERAMIC CHIP	0.1MF		50V
C2462	1-165-319-11	CERAMIC CHIP	0.1MF		50V
C2463	1-165-319-11	CERAMIC CHIP	0.1MF		50V
C2464	1-165-319-11	CERAMIC CHIP	0.1MF		50V
C2465	1-165-319-11	CERAMIC CHIP	0.1MF		50V
C2466	1-165-319-11	CERAMIC CHIP	0.1MF		50V
C2467	1-165-319-11	CERAMIC CHIP	0.1MF		50V
C2468	1-165-319-11	CERAMIC CHIP	0.1MF		50V
C2469	1-165-319-11	CERAMIC CHIP	0.1MF		50V
C2470	1-165-319-11	CERAMIC CHIP	0.1MF		50V
		<CONNECTOR>			
CN306	1-564-526-11	PLUG, CONNECTOR 11P			
CN307	1-564-522-11	PLUG, CONNECTOR 7P			
CN308	1-564-519-11	PLUG, CONNECTOR 4P			
CN2401	⚠ 1-251-263-11	INLET, AC			
CN2402	1-565-167-12	TERMINAL, (S) (WITH SW) 4P			
CN2403	1-569-578-11	TERMINAL, S (WITH SW)			
CN2404	1-764-872-11	CONNECTOR, MULTI 20P			
		<DIODE>			
D2402	8-719-016-74	DIODE 1SS352			
D2404	8-719-800-76	DIODE 1SS226			
D2405	8-719-800-76	DIODE 1SS226			
D2406	8-719-800-76	DIODE 1SS226			
D2407	8-719-800-76	DIODE 1SS226			
D2408	8-719-800-76	DIODE 1SS226			
D2409	8-719-800-76	DIODE 1SS226			
D2410	8-719-800-76	DIODE 1SS226			
D2411	8-719-800-76	DIODE 1SS226			
D2415	8-719-800-76	DIODE 1SS226			
D2416	8-719-800-76	DIODE 1SS226			
D2417	8-719-800-76	DIODE 1SS226			
D2418	8-719-800-76	DIODE 1SS226			
D2420	8-719-037-53	DIODE RD27SB-T1			
D2421	8-719-037-53	DIODE RD27SB-T1			
D2422	8-719-037-53	DIODE RD27SB-T1			
D2423	8-719-037-53	DIODE RD27SB-T1			
		<IC>			
IC2401	8-759-509-71	IC XRU4021BF-E2			
IC2402	8-759-509-71	IC XRU4021BF-E2			
IC2403	8-759-287-89	IC MM1113XFF			
IC2404	8-759-084-76	IC MM1111XF			
IC2405	8-759-287-89	IC MM1113XFF			
		<JACK>			
J2401	1-562-261-71	CONNECTOR, COAXIAL (BNC)			
J2402	1-766-738-11	BNC (WITH SW)			
J2403	1-562-261-71	CONNECTOR, COAXIAL (BNC)			
J2404	1-766-738-11	BNC (WITH SW)			
J2405	1-562-261-71	CONNECTOR, COAXIAL (BNC)			
J2406	1-766-738-11	BNC (WITH SW)			
J2407	1-562-261-71	CONNECTOR, COAXIAL (BNC)			
J2408	1-766-738-11	BNC (WITH SW)			
J2409	1-562-261-71	CONNECTOR, COAXIAL (BNC)			
J2410	1-766-738-11	BNC (WITH SW)			
J2411	1-562-261-71	CONNECTOR, COAXIAL (BNC)			
J2412	1-766-738-11	BNC (WITH SW)			

REF. NO.	PART NO.	DESCRIPTION			REMARK
J2413	1-507-802-41	JACK, PIN (MOUNT TYPE)			
J2414	1-507-802-41	JACK, PIN (MOUNT TYPE)			
J2415	1-507-802-41	JACK, PIN (MOUNT TYPE)			
J2416	1-507-802-41	JACK, PIN (MOUNT TYPE)			
J2417	1-507-802-41	JACK, PIN (MOUNT TYPE)			
J2418	1-507-802-41	JACK, PIN (MOUNT TYPE)			
J2419	1-507-802-41	JACK, PIN (MOUNT TYPE)			
J2420	1-507-802-41	JACK, PIN (MOUNT TYPE)			
		<CHIP CONDUCTOR>			
JR1	1-216-295-91	CONDUCTOR, CHIP			
JR4	1-216-295-91	CONDUCTOR, CHIP			
JR5	1-216-295-91	CONDUCTOR, CHIP			
JR7	1-216-295-91	CONDUCTOR, CHIP			
JR12	1-216-295-91	CONDUCTOR, CHIP			
JR13	1-216-295-91	CONDUCTOR, CHIP			
JR14	1-216-295-91	CONDUCTOR, CHIP			
JR15	1-216-295-91	CONDUCTOR, CHIP			
JR16	1-216-295-91	CONDUCTOR, CHIP			
JR17	1-216-295-91	CONDUCTOR, CHIP			
JR19	1-216-295-91	CONDUCTOR, CHIP			
JR20	1-216-295-91	CONDUCTOR, CHIP			
JR21	1-216-295-91	CONDUCTOR, CHIP			
JR23	1-216-295-91	CONDUCTOR, CHIP			
JR30	1-216-295-91	CONDUCTOR, CHIP			
JR34	1-216-295-91	CONDUCTOR, CHIP			
JR35	1-216-295-91	CONDUCTOR, CHIP			
JR40	1-216-295-91	CONDUCTOR, CHIP			
JR41	1-216-295-91	CONDUCTOR, CHIP			
JR43	1-216-295-91	CONDUCTOR, CHIP			
JR46	1-216-295-91	CONDUCTOR, CHIP			
JR47	1-216-295-91	CONDUCTOR, CHIP			
JR48	1-216-295-91	CONDUCTOR, CHIP			
JR52	1-216-295-91	CONDUCTOR, CHIP			
JR60	1-216-295-91	CONDUCTOR, CHIP			
		<TRANSISTOR>			
Q2401	8-729-120-28	TRANSISTOR 2SC1623-L5L6			
Q2402	8-729-216-22	TRANSISTOR 2SA1162-G			
Q2403	8-729-216-22	TRANSISTOR 2SA1162-G			
Q2404	8-729-216-22	TRANSISTOR 2SA1162-G			
Q2405	8-729-216-22	TRANSISTOR 2SA1162-G			
Q2408	8-729-120-28	TRANSISTOR 2SC1623-L5L6			
Q2409	8-729-120-28	TRANSISTOR 2SC1623-L5L6			
Q2410	8-729-120-28	TRANSISTOR 2SC1623-L5L6			
Q2411	8-729-120-28	TRANSISTOR 2SC1623-L5L6			
Q2412	8-729-120-28	TRANSISTOR 2SC1623-L5L6			
Q2414	8-729-120-28	TRANSISTOR 2SC1623-L5L6			
Q2415	8-729-120-28	TRANSISTOR 2SC1623-L5L6			
Q2416	8-729-216-22	TRANSISTOR 2SA1162-G			
Q2417	8-729-120-28	TRANSISTOR 2SC1623-L5L6			
		<RESISTOR>			
R2401	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R2402	1-216-043-91	METAL GLAZE	560	5%	1/10W
R2404	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R2405	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R2406	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R2407	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R2408	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R2409	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R2410	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R2411	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R2412	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R2413	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R2414	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R2415	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R2416	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R2417	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R2418	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R2419	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R2420	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R2421	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R2422	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R2423	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R2424	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R2425	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R2426	1-214-775-00	METAL	82K	1%	1/4W
R2427	1-216-097-91	METAL GLAZE	100K	5%	1/10W
R2428	1-216-105-91	METAL GLAZE	220K	5%	1/10W
R2429	1-216-025-91	METAL GLAZE	100	5%	1/10W
R2430	1-216-115-00	METAL GLAZE	560K	5%	1/10W
R2431	1-216-077-00	METAL GLAZE	15K	5%	1/10W
R2432	1-214-775-00	METAL	82K	1%	1/4W
R2433	1-216-097-91	METAL GLAZE	100K	5%	1/10W
R2434	1-216-105-91	METAL GLAZE	220K	5%	1/10W
R2435	1-216-025-91	METAL GLAZE	100	5%	1/10W
R2436	1-216-115-00	METAL GLAZE	560K	5%	1/10W
R2437	1-216-295-91	CONDUCTOR, CHIP			
R2438	1-216-077-00	METAL GLAZE	15K	5%	1/10W
R2439	1-214-775-00	METAL	82K	1%	1/4W
R2440	1-216-105-91	METAL GLAZE	220K	5%	1/10W
R2441	1-216-097-91	METAL GLAZE	100K	5%	1/10W
R2442	1-216-025-91	METAL GLAZE	100	5%	1/10W
R2443	1-216-115-00	METAL GLAZE	560K	5%	1/10W
R2444	1-216-077-00	METAL GLAZE	15K	5%	1/10W
R2446	1-214-775-00	METAL	82K	1%	1/4W
R2447	1-216-105-91	METAL GLAZE	220K	5%	1/10W
R2448	1-216-097-91	METAL GLAZE	100K	5%	1/10W
R2449	1-216-025-91	METAL GLAZE	100	5%	1/10W
R2450	1-216-115-00	METAL GLAZE	560K	5%	1/10W
R2451	1-216-077-00	METAL GLAZE	15K	5%	1/10W
R2452	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R2453	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R2455	2-216-113-00	METAL GLAZE	470K	5%	1/10W
R2458	1-216-295-91	CONDUCTOR, CHIP			
R2463	1-216-085-00	METAL GLAZE	33K	5%	1/10W
R2465	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R2466	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R2467	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R2470	1-214-702-00	METAL	75	1%	1/4W
R2471	1-216-093-00	METAL GLAZE	68K	5%	1/10W
R2472	1-216-063-91	METAL GLAZE	3.9K	5%	1/10W
R2473	1-216-037-00	METAL GLAZE	330	5%	1/10W
R2474	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R2475	1-216-091-00	METAL GLAZE	56K	5%	1/10W
R2476	1-214-702-00	METAL	75	10%	1/4W
R2477	1-216-091-00	METAL GLAZE	56K	5%	1/10W
R2478	1-216-063-91	METAL GLAZE	3.9K	5%	1/10W
R2479	1-216-027-00	METAL GLAZE	120	5%	1/10W
R2480	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R2481	1-216-093-00	METAL GLAZE	68K	5%	1/10W
R2482	1-214-702-00	METAL	75	1%	1/4W
R2483	1-216-091-00	METAL GLAZE	56K	5%	1/10W
R2484	1-216-027-00	METAL GLAZE	120	5%	1/10W
R2485	1-216-063-91	METAL GLAZE	3.9K	5%	1/10W
R2486	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R2487	1-216-093-00	METAL GLAZE	68K	5%	1/10W
R2488	1-214-702-00	METAL	75	1%	1/4W
R2489	1-216-091-00	METAL GLAZE	56K	5%	1/10W
R2490	1-216-063-91	METAL GLAZE	3.9K	5%	1/10W
R2491	1-216-027-00	METAL GLAZE	120	5%	1/10W
R2492	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R2493	1-216-093-00	METAL GLAZE	68K	5%	1/10W
R2494	1-214-702-00	METAL	75	1%	1/4W
R2495	1-214-702-00	METAL	75	1%	1/4W
R2496	1-216-091-00	METAL GLAZE	56K	5%	1/10W
R2497	1-216-063-91	METAL GLAZE	3.9K	5%	1/10W

Q

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

The componants identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

REF. NO.	PART NO.	DESCRIPTION			REMARK
R2498	1-216-037-00	METAL GLAZE	330	5%	1/10W
R2499	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R3400	1-216-093-00	METAL GLAZE	68K	5%	1/10W
R3402	1-216-091-00	METAL GLAZE	56K	5%	1/10W
R3404	1-216-063-91	METAL GLAZE	3.9K	5%	1/10W
R3405	1-216-037-00	METAL GLAZE	330	5%	1/10W
R3406	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R3408	1-216-093-00	METAL GLAZE	68K	5%	1/10W
R3409	1-214-702-00	METAL	75	1%	1/4W
R3410	1-216-091-00	METAL GLAZE	56K	5%	1/10W
R3411	1-216-063-91	METAL GLAZE	3.9K	5%	1/10W
R3412	1-216-037-00	METAL GLAZE	330	5%	1/10W
R3413	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R3414	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R3416	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R3417	1-216-093-00	METAL GLAZE	68K	5%	1/10W
R3418	1-214-702-00	METAL	75	1%	1/4W
R3419	1-216-037-00	METAL GLAZE	330	5%	1/10W
R3420	1-216-023-00	METAL GLAZE	82	5%	1/10W
R3421	1-216-689-11	METAL GLAZE	39K	5%	1/10W
R3422	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R3423	1-216-083-00	METAL GLAZE	27K	5%	1/10W
R3424	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R3425	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W
R3426	1-216-099-00	METAL GLAZE	120	5%	1/10W
R3427	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R3428	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R3429	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R3430	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R3431	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R3432	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R3435	1-216-045-91	METAL GLAZE	680	5%	1/10W
R3436	1-216-045-91	METAL GLAZE	680	5%	1/10W
R3437	1-216-045-91	METAL GLAZE	680	5%	1/10W
R3438	1-216-045-91	METAL GLAZE	680	5%	1/10W
R3439	1-216-045-91	METAL GLAZE	680	5%	1/10W
		<SWITCH>			
S2401	1-570-598-11	SWITCH, DIP			

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REF. NO.	PART NO.	DESCRIPTION	REMARK
		MISCELLANEOUS *****************	
	⚠ 1-223-417-11	RESISTOR ASSY (HIGH-VOLTAGE)	(14M4U/E/A)
	⚠ 1-426-442-21	COIL, DEMAGNETIZATION	
	⚠ 1-451-457-11	DEFLECTION YOKE (14M4U/E/A)	
	1-452-032-00	MAGNET,DISK ; 10mmø	
	1-452-094-00	MAGNET,ROTATABLE DISK ; 15mmø	
	1-544-063-12	SPEAKER	
	⚠ 1-576-231-11	FUSE (H.B.C.) 4A/250V	
	⚠ 1-590-910-11	CORD SET, POWER (14M2E/A, 14M4E/A)	
	1-765-268-11	CORD, CONNECTION	
	⚠ 1-765-718-11	CORD SET, POWER (14M2U/14M4U)	
	⚠ 8-451-472-11	DEFLECTION YOKE (14M2U/E/A)	
	⚠ 8-738-333-05	PICTURE TUBE 14MT1 (L-BVM, PVM)	(14M4E/A)
	⚠ 8-738-335-05	PICTURE TUBE 14MT3(L-BVM, PVM)	(14M4U)
	⚠ 8-738-342-05	PICTURE TUBE 14MG(DARK) (14M2U/E/A)	

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REF. NO.	PART NO.	DESCRIPTION	REMARK
		ACCESSORIES AND PACKING MATERIALS **	
	3-170-078-01	HOLDER (B), PLUG	
	3-859-663-12	MANUAL, INSTRUCTION	(14M2E/14M4E only)
	3-859-663-22	MANUAL, INSTRUCTION	
	4-044-040-03	LABEL, TALLY	
	*4-058-820-01	INDIVIDUAL CARTON	
	*4-381-155-01	BAG, PROTECTION	

English
97DZ24130-1

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